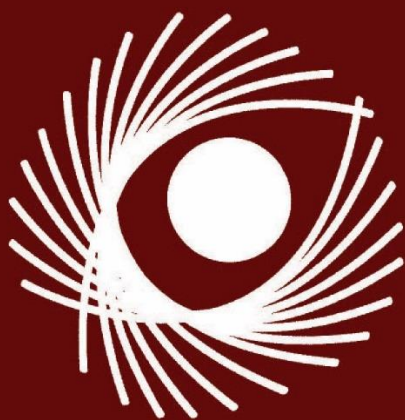




**UNIVERSITY OF
KELANIYA**

**11TH INTERNATIONAL
CONFERENCE ON
BUSINESS AND INFORMATION**
"Transforming Business Strategies for Economic Resilience"

PROCEEDINGS



**ICBI
2020
(online)**

*Faculty of Commerce & Management Studies
University of Kelaniya
Sri Lanka*

**11th International Conference
on
Business and Information
ICBI - 2020**

**"Transforming Business Strategies for Economic
Resilience"**

Conference Proceeding

**Faculty of Commerce and Management Studies
University of Kelaniya
Sri Lanka**

19th November 2020

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11th International Conference on Business & Information
"Transforming Business Strategies for Economic Resilience"

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Web: <http://conf.kln.ac.lk/icbi/>

E-Mail: icbi@kln.ac.lk

Telephone: +94112903502

Fax: +94112917708

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EDITORIAL NOTE



This volume presents the proceedings of the 11th edition of the annual International Conference on Business and Information organised by the Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka. ICBI 2020 is dedicated to various disciplines of business, management, technology and the other related areas. This volume contains abstract of the keynote speech, abstracts of the accepted papers, extended abstracts and the abstracts of the doctoral colloquium. Conference proceedings are hosted using SSRN conference hosting solutions which is a product of Elsevier.

Moreover, we hope to submit the conference proceedings for Scopus indexing. We hope that this ensures that all the accepted full papers are available to a wider community while increasing the impact of the papers on the well-being of the society at large. All the papers including the extended abstracts went through the double-blind refereed procedure, and similarity check. This process along with nearly 40% rejection rate are indications of the quality of the papers that ICBI accepts.

I hope that the ICBI 2020 will mark another step towards a lively exchange of research findings, approaches, expertise, resources, tools, and best practices between researchers and existing networks in the field and pave the ground for future high-quality research in business, management and other related areas.

We look forward to welcoming all of you at the ICBI 2020 conference to be held virtually given the pandemic situation that the entire world is facing.

Dr. S. C. Thushara

Editor in Chief – ICBI 2020

Senior Lecturer

Department of Commerce and Financial Management

Faculty of Commerce and Management Studies

University of Kelaniya, Sri Lanka

MESSAGE FROM THE CONFERENCE SECRETARY



I'm truly honored to deliver a message to the 11th International Conference on Business and Information 2020 (ICBI 2020) of the Faculty of Commerce & Management Studies as the Conference Secretary.

This conference is conducted under the theme of “Transforming Business Strategies for Economic Resilience”, a timely theme where the whole world struggles to adjust and adopt to new normalcy with the COVID 19 pandemic situation. In this age of highly competitive globalization, the higher education has assumed new dimensions. New knowledge creation and dissemination as well as training and guiding new researchers are some of the novel scopes covered by the higher education institutes. ICBI is giving the platform for a wider audience of academia to take the role of researchers and it provides a comprehensive dialogue for scholars and practitioners to share and explore new heights in business, management, and technology practices. It is a great pleasure for me to witness the achievements of these researchers and I take this opportunity to congratulate them on their performance.

Organizing a conference of this extent would not be possible without the dedicated efforts of many individuals. The credit of the success should be shared among each and every personnel behind it. I would especially like to mention the efforts of the organizing committee presided over by the conference chair, the reviewers of the papers, the academic and the non-academic members of the Faculty of Commerce and Management Studies.

We would like to receive constructive comments to further develop the conference and it is my hope that you will find the conference stimulating, fulfilling and enjoyable and I wish you a pleasant experience in ICBI 2020.

Mrs. Bimali Wijesundara

Conference Secretary – ICBI 2020

Senior Lecturer

Department of Marketing Management

Faculty of Commerce and Management Studies

University of Kelaniya, Sri Lanka

MESSAGE FROM THE CONFERENCE CO-CHAIR



The University of Kelaniya, Sri Lanka presents its outcome of “ICBI 2020” aligned to a timely important theme where business professionals and academia are equally responsible to revitalize existing domain of knowledge into new practice paradigms. The ICBI team was very particular about the challenging forces emerged due to unprecedented global issues when planning the scope and the operational model to make a valuable impact to its participants. We made the event as fully online version to penetrate its impact to many local and international participants to share their thoughts whilst witnessing new knowledge and hands-on managerial practices. The main segment of the conference was able to create an invaluable space for researchers to disseminate their excellent findings and thoughts via their systematic studies with a room for a quality publication. The ICBI 2020 features a CEO Forum with the theme of Strategy “Intent Vs Impact” in Economic Outbreaks to create a dialogue with business leaders and academia to bridge new knowledge excellences. The doctoral colloquium of ICBI added more insights to participants to improve their research skills and learn avenues for high quality publications. In overall, main conference disseminates multi-disciplinary knowledge to local and international participants with timely important research works presented by the selected authors followed by a rigorous review process.

As the co-chair of ICBI 2020, I am truly privileged to acknowledge the countless contribution made by researchers, participants and the guest speakers by adding a value to the essence of ICBI. I am pleased to extend my gratitude to all reviewers, editorial board, track coordinators and the working team that made ICBI 2020 a remarkable event with the leadership given by the chair and secretary. Let’s blend the outcome of ICBI 2020 to revitalize the thoughts process for new knowledge creation to excel the research dynamics and business practices ahead.

Dr. D. M. R. Dissanayake

Conference Co-Chair - ICBI 2020

Senior Lecturer

Department of Marketing Management

Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka

MESSAGE FROM THE CONFERENCE CHAIR



It gives me great pleasure to welcome you to the International Conference on Business and Information 2020 (ICBI 2020). Since its initiation in the year 2010, it has grown in scope and depth of knowledge creation, knowledge dissemination, and networking nationally and internationally. This year, continuing its tradition of transcending knowledge for the betterment of business and society, ICBI is unfolding for the 11th consecutive year with the theme “Transforming Business Strategies for

Economic Resilience” on 19th November 2020 as a virtual conference. ICBI is one of the leading conferences in the business management arena. It is organized annually by the Faculty of Commerce & Management Studies of the University of Kelaniya with the participation of academics, scholars, and industry practitioners in business management worldwide. It creates a platform to share knowledge and expertise on the evolution of business management discipline, new business models, solutions to current issues, inventions, innovations, and their application in various sectors in order to create a positive impact on business and society at large.

ICBI 2020 has some noteworthy features introduced to enhance the benefits extended to the participants through ten distinct tracks including a timely track introduced - ‘Social Distancing: Impacts on Business and Society’. A CEO forum is introduced this year with a timely important dialogue on contemporary business challenges and revitalizing measures for the repercussions of the Covid-19 pandemic with the participation of strategic-level managers (CEOs) representing key industries in Sri Lanka. The conference proceedings will be hosted on SSRN which is devoted to the rapid worldwide dissemination of research and is composed of a number of specialized research networks. Especially the accepted papers of the conference will be channeled to be submitted in SCOPUS indexed journals. These two initiatives will increase the global outreach of more than 30 papers presented in the Doctoral Colloquium and nearly 100 full papers and extended abstracts presented in the ten distinct tracks by both national and international scholars.

The success of ICBI 2020 depends on the contribution and the commitment of many parties including the organizing committee, university administration, speakers, scholars, researchers, presenters, and the session chairs. While extending a deep sense of gratitude to them, I wish a successful and enjoyable conference.

Prof. W. M. C. B. Wanninayake

Conference Chair - ICBI 2020

Senior Lecturer

Department of Marketing Management

Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka

MESSAGE FROM THE DEAN OF THE FACULTY



It is with great pleasure I am sending this message to the International Conference on Business and Information (ICBI) 2020, organized by the Faculty of Commerce and Management Studies, University of Kelaniya. It is a renowned fact that the development of the society and industry occurs through research. Nevertheless, researchers need appropriate platforms to present and discuss their findings for mutual benefit. Hence, this research conference

conducting for the eleventh (11th) consecutive year commencing from the year 2010 is highly commendable as a supporting avenue for scholars, academics and practitioners.

It is undoubtedly known that this conference will bring the recognition towards the Faculty as well as to the University. Moreover, I strongly believe that the future of this country depends on the hands of young researchers, and therefore Faculty of Commerce and Management Studies unceasingly support to develop the capabilities of young researchers through various methods.

Researches in applied fields have a direct impact on economic development. Thus, “Transforming Business Strategies for Economic Resilience” is a sensible and desirable theme for Sri Lankan economy. Therefore, this endeavor will unquestionably support both academics and professionals to reshape their thinking towards a sustainable development in the country.

I, as the Dean, take this opportunity to thank Prof. Bandara Wanninayake, the Chair of the ICBI 2020, and Mrs. Bimali Wijesundara, the secretary of the conference and all others who contributed immensely to make this event a success. Also, I would like to extend my heartiest congratulation to local and international researchers who submitted research articles to this conference.

I wish all the success for this conference.

Dr. P. N. D. Fernando

Dean

Faculty of Commerce and Management Studies

University of Kelaniya, Sri Lanka

MESSAGE FROM THE CHAIRMAN OF THE RESEARCH COUNCIL



As the Chairman of the Research Council, I am delighted and honored to bring this message on the occasion of the 11th International Conference on Business and Information (ICBI 2020) organized by the Faculty of Commerce and Management Studies, University of Kelaniya. The contribution to research is pivotal to any nation's development and I would like to make this as an opportunity to appreciate the commitment and involvement of the academic community of our University towards research.

Hence, I have seen the potential of the Faculty of Commerce & Management Studies to provide high quality research in diverse fields management.

I hope that ICBI 2020 triggers the enthusiasm among academics, researchers, students and those who take part in research studies for the enrichment of University research culture under the theme of "Transforming Business Strategies for Economic Resilience". Despite the challenges under "new normal" working conditions due to COVID-19 pandemic, I have no doubt that ICBI 2020 will provide an excellent platform for the authors, presenters and participants to present their research with latest advances in the field of Business and Information, exchange interdisciplinary knowledge, share opinions with researchers and initiate international research collaborations. Therefore, I congratulate the Dean of the Faculty of Commerce & Management Studies, and the conference organizers for organizing ICBI-2020. I wish 11th International Conference on Business and Information 2020 every success.

Senior Professor N. P. Sunil Chandra

Chairman of the Research Council
University of Kelaniya, Sri Lanka

MESSAGE FROM THE VICE CHANCELLOR



As the Faculty of Commerce and Management Studies, University of Kelaniya organizes its annual International Conference on Business & Information for the 11th consecutive year in 2020, I am delighted to write a short message for the conference participants.

The University of Kelaniya sees its key purpose as that of disseminating newly created knowledge in order to support the sustainable development of our nation. Each generation of researchers builds on strong pillars established by academics from various fields in the past, to take the University on a continued journey towards excellence. Each Faculty carries its own responsibility in this mandate; and organizing international conferences to share new knowledge among interested parties in specific disciplines is an important means of fulfilling this responsibility.

I greatly appreciate the tremendous effort made by the academics of the Faculty of Commerce and Management Studies to hold this conference, especially during the global crisis brought about by the COVID19 pandemic. It gave me great pleasure to learn that the entire conference will be run on an online platform, proving the resilience of the conference organizers in successfully adapting to the uncertainties that besiege us on a day-to-day basis these days.

I take this opportunity to wish the Chair, Co-Chair, Organizing Committee and all those who participate in this 11th International Conference on Business & Information, successful and fruitful deliberations.

Cadre Chair & Senior Professor Nilanthi de Silva

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KEYNOTE ABSTRACT



Professor (Dr.) Noel Scott

Adjunct Professor of Tourism Management
University of the Sunshine Coast, Australia
E-mail: nscott1@usc.edu.au

Business Strategies for Economic Resilience: Tourism management and a crisis - COVID-19

Introduction

The concept of resilience derives from the study of ecology and views an ecological system as dynamic (Holling, 1973). The concept has been used to study the dynamic capabilities of businesses in a supply chain (Chowdhury & Quaddus, 2017). The use of the resilience concept by analogy in business highlights the importance of viewing instability (i.e. crisis) as likely, and also therefore that stability is unlikely to last for any length of time.

Holling (1973, p. 21) writes: “A management approach based on resilience, on the other hand, would emphasize the need to keep options open, the need to view events in a regional rather than a local context, and the need to emphasize heterogeneity”. One application of this concept to tourism is to consider that a crisis may be an opportunity to shift a system to a more favourable state rather than return it to the state existing pre-crisis (see Figure 1). As discussed in a previous article:

“The alternative systems perspective is based on the idea of a continuously evolving system where (gradual) change is endemic but a crisis may suddenly result in a fundamentally different state. From this perspective a return to normality is not necessarily the required (or even desired) endpoint. A crisis is seen as the result of one form of change and the effects of a crisis are not confined to its immediate temporal or geographical vicinity. These changes may be positive or negative but certainly the subsequent state may be different from proceeding ones, and importantly, the changes that occur were unplanned from the perspective of the organisations strategic management. In these terms the effect of a disaster as a catastrophic change event is much more likely to trigger a change of state than other ‘lesser’ events” (Scott, Laws, & Prideaux, 2008, p. 7).

This view differs from the majority of prior literature in that it emphasises interconnection, dynamic disequilibrium and change rather than an internal/external ‘return to normal’ perspective.

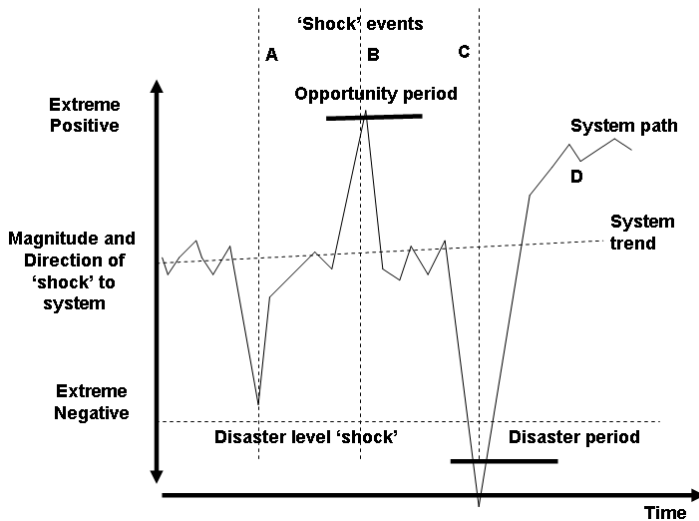


Figure 1: A systemic perspective of a crisis. Source: Scott and Laws (2006).

One opportunity presented by a crisis is to allow development of an altered network of relationships between stakeholders. Destinations as networks of stakeholders may be reconfigured into more efficient structures by a crisis (see Figure 2). This may produce an altered trend path. Crises may also lead to a more cohesive industry wide or community wide response mechanisms, better information flows and indeed the development of new organizational structures. (Quarantelli, 1988).

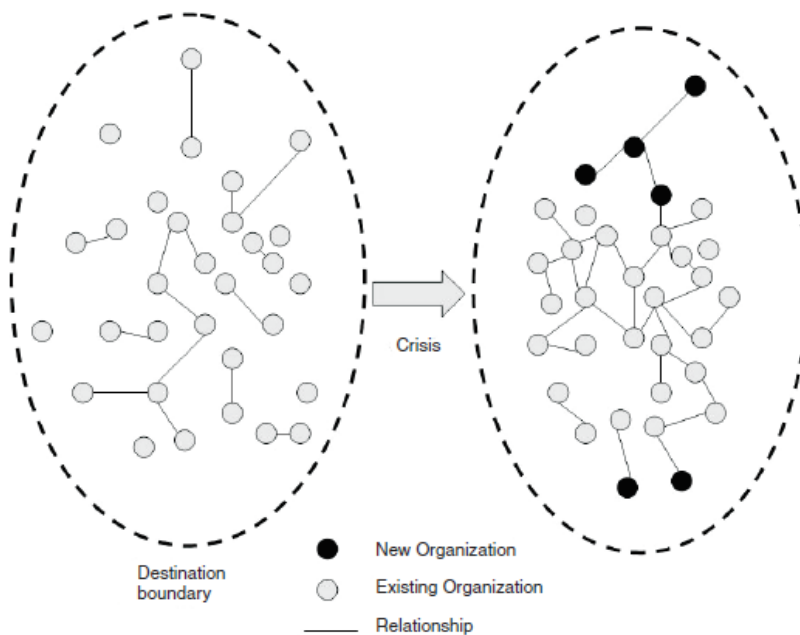


Figure 2: Changes in stakeholder network collaboration. Source: Scott et al. (2008, p. 6).

Another area where a crisis may lead to instability is in the composition of the tourism markets in a destination. As shown in Figure 3 below, a particular destination life cycle is composed of the trajectories of several different markets. Fundamental to this is the idea that the international market is usually only the last of a series of ‘product-markets’ beginning with local, then regional then national tourists. Indeed, in any country the numerical majority of tourists, (usually making up around 70 percent of numbers of overnight visitors, and a greater percentage of day trippers) are from that country. The implication is that during a crisis where international travel declines, domestic travellers may provide a partial replacement.

However, the need for replacement of international travellers with domestic visitors during a crisis may require proactivity on the part of government and industry stakeholders, since the overwhelming numbers of small business in tourism may require help in this transition. This is where the concept of resilience as an inherent characteristic of a system is insufficient. Human systems involve individuals whose individual innovation and resources drive system change. The development of new product markets (i.e domestic versus international tourists) may require change in the product offering. Such innovation is usually driven by entrepreneurs but can be supported by government activity. A conceptual framework for product market development is shown in Figure 4.

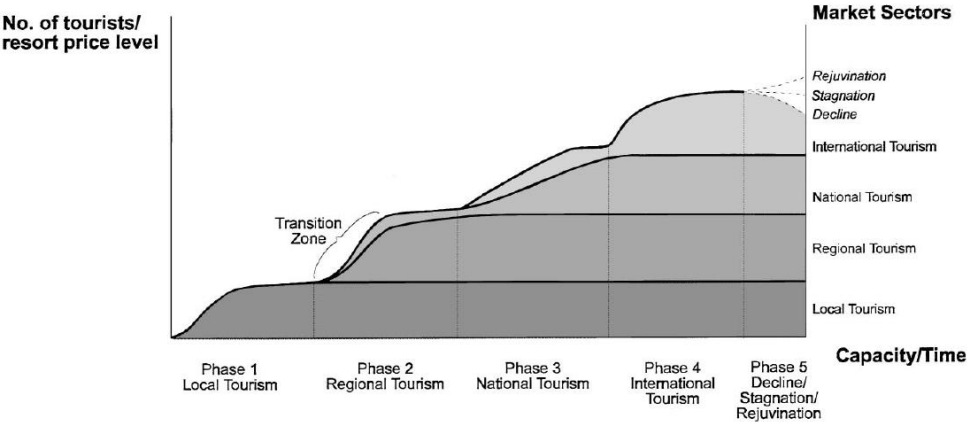


Figure 3: The resort development spectrum Source: Prideaux (2000).

The resilience concept like all analogies is useful in some ways but not in others. In the study of reactions to a tourism crisis, the concept is useful to highlight the opportunity for change to a more desirable system state rather than a return to the previous ‘equilibrium’. However other concepts related to innovation and change are also useful to provide guidance on how to facilitate such change.

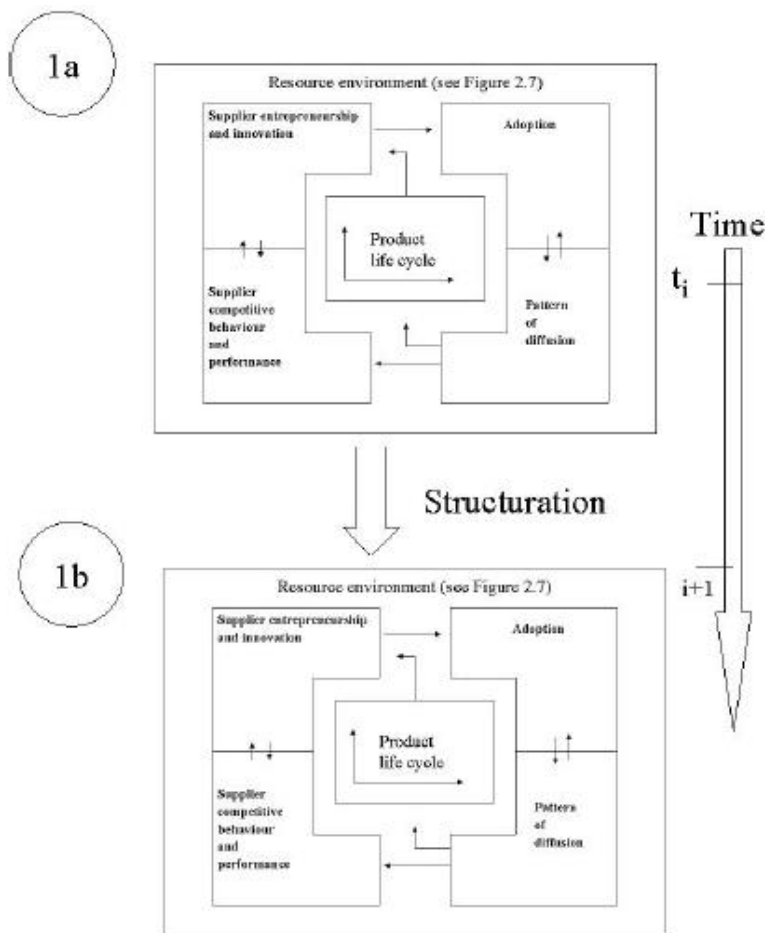


Figure 4: Product market development. Source: Scott (2004).

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Uncovered Equity Parity: Evidence from the Asian Frontier Financial Markets

Dissanayake, D. M. U. H¹ and Weerasinghe, W. D. J. D.²

The purpose of this research is to examine the validity of the Uncovered Equity Parity (UEP) condition in the Asian Frontier Financial Markets. The UEP theory states that, when one country's equity market outperforms another country's equity market, the outperforming country's exchange rate depreciates. This research examines the validity of the UEP condition using the Autoregressive Distributed Lag cointegration approach (ARDL) using three countries (Sri Lanka, Vietnam and Bangladesh) categorized under the Asian Frontier Financial Markets for eleven years from January 2008 to December 2018. The generated results oppose the UEP condition. Thus, it has been observed that the outperformance of a country's equity market led to an appreciation of the exchange rate. Conducting studies to capture the second moment of equity; risk and including regulations and level of financial advancements in the sample would be beneficial.

Keywords: *Autoregressive Distributed Lag, Equity Return Differential, Exchange rate Differential, Uncovered Equity Parity*

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¹ Department of Finance, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka (uththar_2019@kln.ac.lk)

² Department of Finance, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka.

Introduction

Globalization of Financial Markets has led the researchers to move into International Finance as an emerging area, which focuses on the macro economy instead of individual markets. The International Finance compacts on the macro economic factors that occurs between two or more countries. The exchange rate can be considered as one of the main factors under the International Finance (Hau and Rey, 2006). The expansion of international operations has significantly influenced the exchange rate fluctuations. Outperformance of one country's stock market, in relation to another country's stock market would make the exchange rates to fluctuate (Cappiello and De Santis, 2007). This would eventually lead to an appreciation or depreciation of a foreign currency (Curcuro et al., 2014). How does outperformance of a country's equity market affect another country's equity market? this is in relation to the exchange rate, which is a prevailing research question in the recent history, in which Uncovered Equity Parity (UEP) provides the answer. This would eventually lead to an appreciation or depreciation of a foreign currency.

The UEP condition is defined as the correlation between the unhedged returns on the equity market and the returns on the exchange rates (Hau and Rey, 2006). This situation can be explained by considering two countries. A domestic equity investor expands its portfolio to foreign equity investment in order to diversify its portfolio to earn a higher return. When the domestic equity market outperforms the foreign equity market, the domestic currency is subjected to depreciation, thus the domestic equity investor invests in more foreign equity to generate a higher return than the domestic equity market of which the exchange will appreciate. In order to compensate the losses occurred from the domestic equity market, the foreign investment should generate higher equity return than the home equity return (Hau and Rey, 2006).

Due to the high volatility in the Frontier Markets, it is hard for an investor to predict the income which they would generate from the foreign equity market. Thus, in order to identify the relationship between unhedged equity differential returns and exchange rate return, play a vital role. Therefore, it is significant to examine the Uncovered Equity Parity in the Asian Frontier Financial Markets.

Research Gap

When the exchange rate fluctuates rapidly, the transaction risk of the foreign currency would vary. The foreign investor's portfolio choice depends on the exchange rate fluctuations and the correlation structure of exchange rate and the foreign equity returns. For instance, higher equity volatility tends to increase the home equity bias to the investor as the foreign equity holding would generate higher costs to the investor. This would lead the investors to sell the foreign equity holding and rebalance their portfolio choice increasing the demand of the home currency (Curcuro et al., 2014). As most of the countries maintain exchange rates that are volatile, it is hard to predict the future exchange rates of countries which is considered as a main variable in measuring the UEP. As such, it is critical to undertake a study to examine the association between the exchange rate returns with the unhedged equity market return differentials. Being an emerging research area, less number of past studies are available. However, the findings do not seem to be consistent throughout with regard to the developed and emerging markets. For instance, Hau and Rey (2006) stated that, there is a negative correlation between the exchange rate and unhedged equity market differential returns in terms of developed economies which support the Uncovered Equity Parity predictions, whereas, Aftab, Ahmad and Ismail (2018) stated an opposite relationship to the Uncovered Equity Parity condition where an outperformance of foreign equity market links with a foreign exchange rate appreciation. Meese and Rogoff (1983) state that the simple random walk model

outstripped the exchange rate model when explaining the currency rates. Further, as mentioned earlier, prior studies that have been used to examine the UEP condition has been conducted based on the developed and emerging financial markets and no past studies have been conducted to examine the UEP in the Asian Frontier Financial Markets under which Sri Lanka is categorized. Conducting a study on Asian Frontier Financial Markets is relatively important as Sri Lanka, Bangladesh and Vietnam; the countries which are categorized under the Asian Frontier Financial Market category by the MSCI index have higher volatility in exchange rates and relatively high diversification of portfolios. Therefore, it is prudent to examine the UEP condition in the Asian Frontier Financial Markets. Thus, the aim of this study is to examine the UEP condition in the Asian Frontier Financial Markets as no prior studies have been conducted which is identified as the empirical gap in the study.

The following problem statement is identified through the research gap,

Whether, the Uncovered Equity Parity (UEP) condition exists in Sri Lanka, Bangladesh and Vietnam categorized as the Asian Frontier Financial Markets.

Research Objectives

In order to address the above problem statement, the following research objectives have been identified.

General objective

- To examine the validity of the UEP condition in the Asian Frontier Financial Markets

Specific objectives

- To examine the validity of the short run UEP condition in the Asian Frontier Financial Markets
- To examine the validity of the long run UEP condition in the Asian Frontier Financial Markets

Previous studies have been conducted to test the UEP in the developed and emerging financial markets, whereas, no previous studies have been conducted to examine the correlation between the unhedged equity market differentials and exchange rate returns; UEP in Asian Frontier Financial Markets. Due to the high volatility in the Frontier Markets, it is hard for an investor to predict the income which they would generate from foreign equity market.

As previously stated, UEP states that when one country's equity market outperforms another country's equity market, the exchange rate returns of the outperforming equity market will depreciate, (Hau and Rey, 2006) but based on the conventional wisdom, it is believed that the country in which the equity market outperforms more than the other country, the currency of the outperforming country would appreciate; a country with a strong equity market would appreciate its exchange rate. Therefore, the controversy between the UEP condition and the conventional wisdom can be identified as a limitation.

Literature Review

In the past, the investors held the equity investments only in their domestic country. However, the globalization and the growth in the telecommunication has led to in the increase of investment in foreign equity. The global financial integration has enhanced the investors to increase their investments in both domestic and foreign equity by expanding their portfolio. When a country enters into transactions with other countries, the exchange rates between the countries should be taken into account. Therefore, the researchers tend to identify the

relationship between the exchange rate and the domestic and foreign equity returns. The two country model of equity markets along with the exchange rates is known as the UEP (Hau and Rey, 2006).

Hau and Rey (2006) initially shed light on the theoretical background of the UEP condition by formulating the theory considering domestic investors who hold both domestic and foreign equity investments. Hau and Rey (2006), identified that when the foreign equity holdings outperform the domestic equity holdings, the domestic investors are exposed to higher exchange rate risk since the equity is not fully hedged. To mitigate the exchange rate risk exposure, the domestic investors may rebalance their equity portfolio. As a result, the domestic investors may retire some of their foreign equity holdings to reduce the exchange rate risk exposure. This will ultimately lead to a foreign currency depreciation. Capiello and De Santis (2007) proposed a new extension for the UEP condition based on the Standard Asset Pricing model of Robert and Lucas (1982). According to Capiello and De Santis (2007), the relationship between the expected exchange rate changes and differentials in expected returns on unhedged equity of two countries are known as Uncovered Return Parity (URP), in which the equity return differentials are not known *ex ante*. Similar to Capiello and De Santis (2007), Heimonen (2009), identified the negative correlation between the exchange rate returns and the equity return differentials of domestic and foreign countries which strongly supported the UEP condition by analyzing both emerging and developed markets. Kim (2011), extended the traditional UEP by incorporating the market risk factors affecting the rebalancing model. Curcuro et al. (2014), examined the UEP condition by incorporating the US investors' international portfolio across 42 markets. The researchers found strong evidences which support the UEP condition. Curcuro et al. (2014), stated that the investors sell the equity, which recently performed well. According to Kunkler and MacDonald (2018), the Uncovered Equity Parity correlation is the correlation between the unhedged equity market differentials and the associated exchange rates. The variance of the exchange rate returns is always positive which leads to the UEP correlation towards the negative spectrum (Kunkler and MacDonald, 2018). Cenedese, Payne, Sarno and Valente (2015), measured the UEP condition by incorporating the empirical asset pricing model to demonstrate that the UEP correlation can be either positive, negative or zero. Extending the previous studies, Kopecky, Yi and Yoo (2015), developed the UEP condition using the inter-temporal consumption model and derived that the UEP condition does not hold when the foreign equity risk premium is relatively higher than the domestic equity risk premium as domestic equity returns are positively correlated with the domestic consumption, while real foreign equity returns move reversely to the real exchange rate appreciation. Amidst the results generated through the past studies, are controversial. Therefore, it creates a significant research gap to study. The fundamental study of UEP condition, Hau and Rey (2006), is based on 17 OECD countries. Similarly, Heimonen (2009); Curcuro et al. (2014), tested UEP in developed markets. Kopecky et al. (2015), measured the validity of the UEP condition using a sample of G-7 countries. Additionally, the results generated by Ulku, Fatullayev and Diachenko (2016), Yan (2017), Aftab et al. (2018), on the emerging markets state that there is a positive relationship between the unhedged equity market differentials and the exchange rate returns which violates UEP condition. The relative risk, information asymmetry, presence/absence of profitable investment opportunities, wealth and market size is considered in the emerging markets (Ulku et al., 2016). Additionally, Iarovyi (2012), examined the Uncovered Equity Parity condition using sample countries, namely, Australia, Japan and New Zealand; the Asian Tigers with minimal regulations of international capital flows and high currency turnover. Though literature is published using both developed and emerging markets as sample, no studies have been conducted to capture the Uncovered Equity Parity condition on the Asian Frontier

Financial Markets. Therefore, the identified significant research gap in this study is that, hardly any studies in this area has been conducted in the Asian Frontier Financial Markets.

The exchange rate plays a vital role in deciding the currency movements among nations. Therefore, empirical results of the literature on the exchange rate movements are analyzed. The exchange rate plays a vital role in deciding the currency movements among nations. Therefore, empirical results of the literature on the exchange rate movements are analyzed. Initially, the study of Meese Rogoff (1983), explained that there is no relationship between the exchange rate and equity returns. According to Solnik (1987), there is only a weakly positive relationship between the stock returns and the exchange rate movements. Brooks, Edison, Kumar and Slok (2004), initially identified the negative correlation between the risky portfolio assets and the exchange rate by incorporating the excess Euro returns compared to the dollar using the Euro-Dollar exchange rate. These empirical results made the foundation to measure the relationship between the unhedged equity returns and the exchange rate returns. However, the provided results were counterintuitive as it is not in line with the conventional wisdom that a country with a strong equity market maintains a strong exchange rate (Brooks et al., 2004). Similarly, Heimonen (2009), examined the impact of the Euro-Dollar exchange rate in the US and Europe by analyzing the behavior of an individual investor. The findings indicate that, when the Euro area generates excess return equity than US, the Euro will be depreciated causing an equity capital outflow from the Euro area to US Heimonen (2009). Caporale, Ali, Spagnolo and Spagnolo (2017), extended the work of Brooks et al. (2004), Heimonen (2009), by investigating the relationship between the international portfolio flows and the exchange rate volatility in both emerging and developing Asian countries. Contrary to the previous studies, Caporale et al. (2017), suggests that, high exchange rate volatility is affected with equity inflows from Asian countries towards the US in all cases.

Research Methodology

Research Design

This study follows a deductive approach which focuses on the technique of quantitative data collection. The population of this research study is comprised with the Asian Frontier Financial Markets, namely, Sri Lanka, Bangladesh and Vietnam, which is categorized under the MSCI index in June 2019. The sample is the same as the population. Following the previous studies, sample countries are considered as foreign markets, whereas the United States is considered as the home currency and the benchmark country (Cappiello and De Santis, 2007; Aftab et al., 2018). Further, this study would cover a period of 11 years from January 2008 to December 2018. The variables included in the study are, Exchange Rate Returns (EX), Equity Return differentials (ER), Interest Rate differentials (ID), Trade Balance (TB), Economic Activity (EA), Monetary Base (MB) and Market Capitalization (MC). Equity Return Differentials (ER) are defined as the monthly equity return differentials of the log returns of sample country equity market and the log returns of US equity market in the local currency. Trade Balance (TB) can be measured as the Trade Balance of the sample countries in the sample period, normalized to its GDP. Interest Rate Differentials (ID) are measured by the constant interest rate differences of the lending rates of the sample economy and the benchmark economy; USA. The constant difference of Average Weighted Prime Lending Rate (AWPLR) of the sample countries and the USA is considered as the interest rate.³ Market capitalization is referred as the market capitalization to Gross Domestic Production (GDP) and Monetary Base (MB) is measured by money supply to Gross Domestic Production (GDP).

³ As AWPLR is not available to Vietnam and Bangladesh, the constant lending rates is used.

Economic Activity (EA) is measured through the log monthly industrial production index growth of the sample countries. The data is employed in a monthly frequency observed on the last day of each month. This study would employ a country wise panel data analysis. Sources of secondary data for this research study includes, data obtained from Bloomberg LP, Colombo Stock Exchange official website, World Bank database, International Monetary Fund Statistics, and Federal Reserve Bank of St. Louis Economic Research database.

3.2 Research Model and Empirical Method

The model of the study to test the UEP condition is developed through the portfolio rebalancing model by Hau and Rey (2006) in which equity return differentials are used to explain the exchange rate returns.

$$EX_t = \alpha_0 + \beta_1 ER_{i,j,t} + \mu_i \quad (1)$$

According to the theory, $\beta_1 > 0$ indicates that, an increase in equity return differentials results in an exchange rate depreciation in the sample country, i or an appreciation in the USA. μ_i refers to the error term. Autoregressive Distributed Lag approach (Aftab et al., 2018) incorporated by Pesaran et al. (2001) is used to measure the level relations along with the nonlinear long run and short run effects separately by decomposing the positive and negative descriptive variables. In order to measure the nonlinear variables, an asymmetric specification of the ARDL model of Shin et al. (2014) was employed. In order to conduct an Autoregressive Distributed Lag analysis (ARDL), stationary in the variables at level; $I(0)$ or first difference; $I(1)$ or both is required. In order to measure the short run effects VECM model (Aftab et al., 2018) is employed as follows;

$$\Delta \ln(EX_t) = \alpha + \sum_{t-1}^{q1} \beta_1 \Delta \ln(EX_{t-i}) + \sum_{t-0}^{q2} \beta_2 \Delta \ln(ER_{t-i}) + \lambda EC_{t-1} + \mu_i \quad (2)$$

Where, Δ is the first difference operator, α is the constant term of the model. The long run relationship is identified through the F statistics of the Bounds test for co-integration.

Findings and Discussion

Bivariate Analysis

Table 1: Co-integration analysis and diagnostic statistics of the bivariate analysis

	LM	HSK	RESET	F stat	CUSUM	CUSUMQ	ECM _{t-1}
SL	0.923	0.292	0.056	15.057	S	S	-0.00028***
VTN	0.263	0.438	0.390	48.531	S	S	-1.2531***
BNG	0.459	0.239	0.422	12.689	S	U	-0.7483***

Source: EViews output

Notes: SL, VTN and BNG represents Sri Lanka, Vietnam and Bangladesh respectively. Both LM and RESET are based on chi-square distribution with critical value of 3.8415 with one degree of freedom. The stability and Instability of the CUSUM and CUSUMQ are denoted as S and U respectively. HSK is the Breusch-Pagan-Godfrey heteroscedasticity F-test. F statistics measure the bounds test for co-integration. The lower and upper bound value at 5% significance level are, 4.94 and 5.93 respectively. ECM_{t-1} is the error correction term and it shows the speed of adjustment to the equilibrium. ***, ** and * denotes significance at 1%, 5% and 10% respectively. The critical values of standard t-distribution.

The bivariate analysis covers the estimates of the linear model (2). The maximum lag length of eight was selected through the Akaike 's Information Criterion. As per the results generated through the Bounds test of Co-integration in Table 1, it indicates that the variables are co-integrated. Table 1 indicates the diagnostic tests to measure the suitability of the model for further analysis. The significant negative value of ECM shows the speed of adjustment of the model. The p values of LM and Breusch Pagan Godfrey tests are above the 5% significance level of the whole sample and fails to reject the null hypotheses of no serial correlation and no heteroscedasticity, indicate that the model is free from the issue of serial correlation and heteroscedasticity. The Ramsey RESET values which are statistically insignificant, fails to reject the null hypothesis; the model is correctly specified. This concludes that the model is correctly specified. The CUSUM and CUSUM tests for the sample countries support the model stability, at least in one of these two tests.

The main objective of the study; to examine the positive relationship between the equity return differentials and exchange rate returns is measured through the bivariate analysis. Table 2 measures the short run and long run relationship of the bivariate analysis.

Table 2: Short run and Long run estimates of the bivariate analysis

a. The Short run coefficient estimates - Dependent Variable - $\Delta \ln EX$

	$\Delta \ln(ER_t)$	$\Delta \ln(ER_{t-1})$	$\Delta \ln(ER_{t-2})$	ECM_{t-1}
Sri Lanka	-0.000563***			-0.00028***
Vietnam	-0.000353***	0.000230**		-1.253141***
Bangladesh	-0.000121***			-0.748315***

b. The long run coefficient estimates		
	Constant	$\ln(ER)$
Sri Lanka	0.005555	-0.00140***
Vietnam	0.003151	-0.00050***
Bangladesh	0.001637	-0.00016***

Source: EViews output

Notes: ***, ** and * denotes significance at the 1%, 5% and 10% respectively

The results in Table 2 show that the equity return differentials are negative and significant both in the short run and long run for the whole sample which opposes the UEP prediction in the Asian Frontier Financial Markets. However, the latter adjustments in Vietnam supports the UEP condition.

Multivariate Analysis

Bivariate analysis includes two variables into account that may occur errors due to omitted variables. Therefore, a multivariate model is re-specified by including important variables to test the existence of UEP (Aftab et al., 2018). According to Moore and Wang (2014), Trade Balance and Interest Rates are identified as the principal determinants of equity and currency market interactions. Hau and Rey (2006), argued that Monetary Base and Market Capitalizations as major determinants of these interactions. Aftab et al. (2018) identified Economic Activity as a significant factor influencing the equity and currency market interactions. Therefore, these variables are introduced to control the omitted variable bias.

Table 3: Co-integration analysis and diagnostic statistics of the multivariate analysis

	LM	HSK	RESET	F stat	CUSUM	CUSUMQ	ECM _{t-1}
SL	0.454	0.367	0.3402	11.2885	S	S	-0.6531***
VTN	0.807	0.311	0.7681	47.5117	S	S	-0.8779***
BNG	0.569	0.083	0.2999	12.5006	S	U	-1.3684***

Source: EViews output

Notes: Both LM and RESET are based on chi-square distribution with critical value of 3.8415 with one degree of freedom. The stability and Instability of the CUSUM and CUSUMQ are denoted as S and U respectively. HSK is the Breusch-Pagan-Godfrey heteroscedasticity F-test. F statistics measure the bounds test for co-integration. The lower and upper bound value at 5% significance level are, 4.94 and 5.93 respectively. ECM_{t-1} is the error correction term and it shows the speed of adjustment to the equilibrium. ***, ** and * denotes significance at 1%, 5% and 10% respectively. The critical values of standard t-distribution.

The null hypotheses of Breusch-Godfrey serial correlation LM test is insignificant at 5% and fails to reject the null hypothesis of no serial correlation for the whole sample. Breusch-Pagan-Godfrey heteroscedasticity F-test is used to test whether the model is suffering from heteroscedasticity. As per the Table 3, strong evidence fails to reject the null hypothesis of the test of no heteroscedasticity. The insignificant p values for the Ramsey's RESET in Sri Lanka, Vietnam and Bangladesh reveals that the model is correctly specified and it is suitable for future forecasting. The CUSUM and CUSUMQ measures the stability of the selected ARDL model. The generated results signify that the model is stable over the sample period for Sri Lanka and Vietnam because the blue lines for both CUSUM and CUSUMSQ lies within critical bounds and is significant at the 5% level. The CUSUM test is satisfactory for Bangladesh. The diagnostic test results indicate that the model is suitable and stable for the future forecasting. The multivariate VECM specification is as follows.

$$\Delta \ln(\text{EXt}) = \alpha + \sum_{t-i}^{q1} \beta 1 \Delta \ln(\text{EXt-i}) + \sum_{t-i}^{q2} \beta 2 \Delta \ln(\text{ERt-i}) + \sum_{t-i}^{q3} \beta 3 \Delta \ln(\text{EA}_{t-i}) + \sum_{t-i}^{q4} \beta 4$$

$$\Delta \ln(\text{ID}_{t-i}) + \sum_{t-i}^{q5} \beta 5 \Delta \ln(\text{MC}_{t-i}) + \sum_{t-i}^{q6} \beta 6 \Delta \ln(\text{MB}_{t-i}) + \sum_{t-i}^{q7} \beta 7 \Delta \text{TB}_{t-i} + \lambda \text{EC}_{t-1} + \mu i$$

(3)

Table 4 shows the short run and long run estimates of the multivariate model. The short run estimates are shown only for ER, however, long run estimates are shown for all the variables.

Table 4: Short run and Long run estimates of the multivariate analysis

a. The Short run coefficient estimates - Dependent Variable - $\Delta \ln \text{EX}$

	Sri Lanka	Vietnam	Bangladesh
$\Delta (\text{ER})$	-0.000511***	-0.000529***	-0.000128***
$\Delta (\text{ER}(-1))$	-0.000181		0.000277
$\Delta (\text{ER}(-2))$	0.000319		0.000271
$\Delta (\text{ER}(-3))$	0.000711***		0.000203
$\Delta (\text{ER}(-4))$	-0.000005		0.000134
$\Delta (\text{ER}(-5))$	0.000437***		-0.000451**

b. The long run coefficient estimates

	Sri Lanka	Vietnam	Bangladesh
Constant	-0.211678	-0.044439	-0.194872***
ER _t	-0.003121***	-0.000602***	-0.000608***
EA _t	-0.008414	0.008854	0.021223***
ID _t	-0.037640	-0.032723	0.050391
MC _t	0.030010	-0.008212	0.015361
MB _t	0.034674	0.005958	0.005405*
TB _t	0.000838**	-0.000024	0.000913

Source: EViews output

Notes: ***, ** and * denotes significance at the 1%, 5% and 10% respectively

The results of the multivariate analysis in Table 4 are negative and significant in both the short run and long run, which are in line with the bivariate analysis results. Therefore, the results drawn through the multivariate analysis oppose the UEP condition in Asian Frontier Financial Markets. However, the positive significant relationship with EA and EX can be seen in the long run in Bangladesh. It is identified that MB has a positive and 10% level significant relationship on ER. A TB coefficient of 0.000838 negatively affects ER in Sri Lanka, which further promotes the negative linkage between EX and ER. The above estimates were conducted with the assumption that ER is linear. However, the generated results would be different in a non-linear behavior of ER.

Asymmetric Analysis

Being a macroeconomic variable, equity return differentials (ER) may lead to nonlinear behaviour and as the financial markets are based on the prospects and in a case where the anticipations exists, the exchange rate returns may respond to an enhancement or a reduction in the equity market performance simultaneously. Thus, the exchange rate returns indicate an asymmetric response to the changes in the model (Aftab et al., 2018). In order to drive away the asymmetries of the exchange rate, the asymmetric specifications of the ARDL model have been developed by Shin et.al., (2014). Aftab et al. (2018), suggest that, the Autoregressive Distributed Lag approach can better detect the Uncovered Equity Parity condition along with its short run and long run effects and has the potential to deliver reliable estimates. Therefore, in order to measure the nonlinear behaviour in the equity return differentials the Nonlinear Autoregressive Distributed Lag (NARDL) is developed to access both short run and long run effects. ER containing positive changes = (+) and ER containing negative changes = (-) can be represented as follows.

$$\begin{aligned}
 ER_t^+ &= \sum \Delta L_n ER_j^+ = \sum \max(\Delta L_n ER_j, 0) \\
 ER_t^- &= \sum \Delta L_n ER_j^- = \sum \min(\Delta L_n ER_j, 0)
 \end{aligned}
 \tag{4}$$

The ARDL model for the asymmetric analysis is shown below.

$$\Delta \ln(EX_t) = \alpha + \sum_{t-1}^q \beta_1 \Delta \ln(EX_{t-i}) + \sum_{t-0}^q \beta_2 \Delta \ln(ER^-_{t-i}) + \sum_{t-0}^q \beta_3 \Delta \ln(ER^+_{t-i}) + \sum_{t-0}^q \beta_4 \Delta TB_{t-i} + \sum_{t-0}^q \beta_5 \Delta \ln(ID_{t-i}) + \sum_{t-0}^q \beta_6 \ln(EA_{t-i}) + \sum_{t-0}^q \beta_7 \ln(MC_{t-i}) + \sum_{t-0}^q \beta_8 \ln(MB_{t-i}) + \phi(EX_{t-1}) + \phi(ER^-_{t-1}) + \phi(ER^+_{t-1}) + \phi TB_{t-1} + \phi \ln(ID_{t-1}) + \phi \ln(EA_{t-1}) + \phi \ln(MC_{t-1}) + \phi \ln(MB_{t-1}) + \mu_i \quad (5)$$

Table 5: Co-integration analysis and diagnostic statistics of the asymmetric analysis

	LM	HSK	RESET	F stat	CUSUM	CUSUMQ	ECM _{t-1}
SL	0.498	0.604	0.0008	4.9847 **	S	S	-0.633***
VTN	0.976	0.966	0.3925	13.6145***	S	S	-1.189***
BNG	0.228	0.054	0.3733	8.4316 ***	S	S	-0.872***

Source: EViews output

Notes: Both LM and RESET are based on chi-square distribution with critical value of 3.8415 with one degree of freedom. The stability and Instability of the CUSUM and CUSUMQ are denoted as S and U respectively. HSK is the Breusch-Pagan-Godfrey heteroscedasticity F-test. F statistics measure the bounds test for co-integration. The lower and upper bound value at 5% significance level are, 4.94 and 5.93 respectively. ECM_{t-1} is the error correction term and it shows the speed of adjustment to the equilibrium. ***, ** and * denotes significance at 1%, 5% and 10% respectively. The critical values of standard t-distribution

Table 4, implies the diagnostic statistical results for the asymmetric model. The insignificant p values of LM and Breusch-Pagan-Godfrey heteroscedasticity test fails to reject the null hypothesis of no heteroscedasticity. The insignificant p values for the Ramsey's RESET in Vietnam and Bangladesh; fails to reject the null hypothesis of the model, which is correctly specified, reveals that the model is correctly specified. However, the significant p value of 0.0008 in Sri Lanka reveals to reject the null hypothesis; the model is correctly specified due to the asymmetric relationship between the variable in the model. CUSUM and CUSUMQ tests conducted to test the model stability show that the model is correctly specified for the whole sample. Thus, the stable model can be used for further forecasts.

Table 6: Short run and Long run estimates of the asymmetric analysis

a. The Short run coefficient estimates - Dependent Variable- $\Delta \ln EX$

	Sri Lanka	Vietnam	Bangladesh
$\Delta (ER_POS)$	-0.000602**	-0.000056	-0.000107
$\Delta (ER_POS(-1))$	-0.000866**	0.000163	0.000751**
$\Delta (ER_POS(-2))$	0.000922**	0.000239	
$\Delta (ER_POS(-3))$	0.000399	0.000019	
$\Delta (ER_POS(-4))$	-0.000154	-0.000340*	
$\Delta (ER_POS(-5))$	0.000929***	-0.000298*	

$\Delta (ER_NEG)$	-0.000564	-0.000835***	-0.000006
$\Delta (ER_NEG(-1))$	0.000664*	0.000012	-0.000314
$\Delta (ER_NEG(-2))$	-0.000053	0.000360**	0.000346
$\Delta (ER_NEG(-3))$	0.000869**	-0.000111	0.000703
$\Delta (ER_NEG(-4))$	0.000432	0.000069	0.000538
$\Delta (ER_NEG(-5))$		-0.000277*	-0.000757**

b. The long run coefficient estimates

	Sri Lanka	Vietnam	Bangladesh
Constant	-0.168070	-0.019328	-0.322374
ER_POS	-0.003874***	-0.000355***	-0.001337**
ER_NEG	-0.003839***	-0.000333***	-0.001188**
EA _t	-0.015627	-0.000821	0.009471
ID _t	-0.163759	-0.011299	-0.323732
MC _t	0.019762	0.000516	0.077836
MB _t	0.045904	0.005588	0.014378
TB _t	0.000752*	-0.000008	0.000881

Source: EViews output

Notes: ***, ** and * denotes significance at the 1%, 5% and 10% respectively

As per the estimates in the short run asymmetric analysis, it is identified that more variables are found significant in adjustments of lags than the symmetric multivariate model. The ER-POS and ER-NEG coefficients are negative in the short run. However, in some cases, there are positive coefficients in the subsequent adjustments in latter lags. This may translate that the portfolio rebalancing as a lagged process. In fact, the portfolio rebalancing decision extents around a week to a month (Hau and Rey, 2006). As per the results, 1% positive increase in the ER will lead to 0.0602% decrease in the exchange rate returns in Sri Lanka significantly. The latter positive adjustments of ER in Vietnam lead to significant negative impacts to EX.

According to the long run results, the direction of the ER-POS and ER-NEG coefficients are negative and significant in the long run as well in the short run which supports the EX and ER negative linkage. As per the ER NEG, it is identified that 1% decrease in the equity return differentials will result in a 0.3839%, 0.0333% and 0.1188% decrease in exchange rate return in Sri Lanka, Vietnam and Bangladesh respectively and statistically significant at 1%. Therefore, it is concluded that, greater effects are sourcing from the positive changes. The Wald statistics are used in order to identify the cumulative asymmetries both in the short run and long run (Aftab et al. 2018).

Table 7: Short run and Long run asymmetries.

	Short run	Long run
Sri Lanka	24.88167***	4.388853**
Vietnam	57.63249***	12.02420***
Bangladesh	7.527521	19.84639**

Source: EViews output

Notes: ***, ** and * denotes significance at the 1%, 5% and 10% respectively.

According to the results provided in the Table 7, it is identified that the equity return differential effect is asymmetric in Sri Lanka and Vietnam both in the short and long run, whereas the effect is asymmetric in Bangladesh in the long run.

Conclusion

This study attempts to examine the newly emerged UEP condition in the international financial literature which indicates that when a country's equity market outperforms relative to another country, the currency of the outperforming country depreciates. The UEP has led the investors to diversify their portfolio. The observed literature states that UEP condition is valid for the developed markets (Hau and Rey, 2006; Curcuru et al., 2014). As there were no past studies conducted to examine the UEP in the Asian Frontier Financial Markets, this research is conducted to fill the empirical gap. The results obtained through the ARDL and VECM models were used to either accept or reject the hypotheses. It was found that equity return differentials negatively impact the exchange rate returns both in the short run and long run, which indicates that when a country's equity market outperforms another country's equity market, the outperforming country's exchange rate appreciates. This opposes the validity of the UEP condition in the Asian Frontier Financial Markets. However, it can be identified that some support to the UEP condition in the latter adjustment lags only in the short run. These findings may be linked to the results generated through the expansionary monetary policy in the advanced markets that have even experienced negative constant interest rates in the recent past and this situation has encouraged the capital flows to the emerging markets (Bussiere and Phylaktis, 2016). These results are strongly based on bivariate, multivariate and nonlinear multivariate frameworks both in the short and long run. This negative linkage between the equity return differentials and exchange rate returns are supported by prior studies (Campbell et al., 2010; Katechos, 2011; Ulku et al., 2016; Kunkler and MacDonald, 2018; Aftab et al., 2018). However, Hau and Rey (2006); Cappiello and De Santis (2007); Heimonen (2009); Kim (2011); Curcuru et al. (2014) argued that when an equity market outperforms another equity market, the outperforming market's exchange rate depreciates. Therefore, the objectives of the study were achieved. The results of this study provide practical implications that are expected to help the investors, market participants, researchers (Curcuru et al., 2014). Practitioners could evaluate the negative relationship between the equity return differentials and exchange rate returns of Asian Frontier Financial Markets. The investors, market participants and the regulatory authorities can use the results of the study to structure the portfolio in an effective manner and to develop new regulations and to make recommendations that further improve the exchange rate appreciation. Future studies could apply a longitudinal study method by using the data for many years and a larger sample size, which would further increase the reliability of the results. This study incorporates monthly data. Future research could include a comparative study using daily, and quarterly data along with the monthly data for more robust results. This study only focuses on the first moment of the equity market;

return. Therefore, future studies could be conducted to capture the second moment of the equity market; risk. This research study is conducted by including the index equity market differentials of sample countries and USA. Hence, when conducting future studies with the use of individual investors, it would be fruitful to know their nationality. The current study includes the market capitalization to GDP, broad money to GDP and economic activity which measures different aspects of the financial market to measure the equity return and the exchange rate return relationship. Therefore, future studies could include areas to such as, regulations and the level of financial advancement to measure the UEP validity in the Asian Frontier Financial Markets.

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Socio-Economic, Trading Sophistication and Self-Reflection on Investors' Disposition Bias: Evidence from Colombo Stock Exchange

Kawshala, B. A. H.¹ and Anuradha. P. A. N. S.²

Individual investor's behavior is extensively influenced by biases that are highlighted in the growing discipline of behavior finance. This study is one of another effort to assess the determinants of behavioral biases in investor's investment decision-making. The present study has analyzed the influence of socio-economic factors (i.e. investors' age, gender, education, profession, and income), trading sophistication factors (i.e. trading experience and trading frequency) and self-reflection on disposition bias in investment decision-making in Colombo Stock Exchange (CSE). A questionnaire is designed and through survey responses were collected from 243 investors. The present research has applied inferential statistics and descriptive statistics. The results show that, the disposition bias influences men and women equally. Furthermore, disposition bias can be seen clearly in investors coming within the older age group, who have a less educational qualifications and low-income earners, and less trading experience and trading frequency. Self-reflection can be seen in disposition bias. Further, one's profession does not impact on disposition bias. This study will be helpful to financial intermediaries to advice their clients. Moreover, the results of present study facilitate individual investors to realize their disposition bias by its' determinants in the pursuit of making sensible and effective financial decisions.

Keywords: *Disposition, Self-reflection, Socio-economic, Trading Experience, Trading Sophistication,*

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¹ Department of Commerce and Financial Management, University of Kelaniya, Sri Lanka. (hirindu@kln.ac.lk)

² Department of Finance, University of Sri Jayewardenepura

Introduction

Traditional finance theory explains that the financial market and market agents are efficient, systematic and investors are rational (Kumar & Goyal, 2016). Even though the discipline of modern finance has grown progressively, it is still difficult to explain on the scientific grounds that why people behave non-rationally while dealing with money. While traditional finance assumes people are rationalized, the concept of behavior finance was initially introduced in 1980 by the psychologists, Daniel Kahneman and Amos Tversky. They were known as fathers of behavioral finance (Gill & Bajwa, 2018). Behavioral finance focuses on the psychological aspects of financial decision-making and discusses irrational behavior of investors in decision-making on investment. This is affected by different behavioral biases which allow investors to move away from rationality and make irrational investment decisions (Bakar & Yi, 2016). Behavioral biases provide reasons for the asymmetry between the way humans make decisions involving gains and decisions involving losses (Kahneman & Tversky, 1979). Disposition, overconfidence, herding, anchoring, cognitive dissonance, availability bias, self-attribution, mental accounting, framing, representative bias, are few biases that are viewed as building blocks of behavioral finance that significantly influence the decision making of individual investor (Shefrin, 1988), (Singh, 2016).

Here, in the present study, researcher reviews the disposition bias, which is one of the investment biases that has been broadly explored in behavioral finance over the past few decades (Kumar & Goyal, 2016). The disposition effect is the propensity of investors to refrain from realized loss in expectations of realized gains (Pelster & Hofmann, 2018). In many studies emphasis has been focused on investigating the influence of disposition bias on individual investor decision making in diverse cultures or environments from different points of view (Shah et al., 2018).

There are many factors that impact on individual investors' biases in the international share market. These factors vary according to cultural differences among countries (Arshad and Sharif, 2018). In CSE, as individuals live in a collective culture, their values may play a vital role in investment decisions. Therefore, it is essential to recognize the specific factors that determine individual investors' biases in Sri Lankan context (Shantha et al., 2018). Several socio-economic factors were used to define investor profile in both primary and secondary equity markets. Among the socio-economic factors, investors' age, gender, education, their profession and the income earned by the investors play an important role in determining investment biases among investors (Tekçe et al., 2016). Moreover, as Baker et al. (2019) pointed out there are limited academic research efforts to unravel how socio-economic variables determine investment biases (Kumar and Goyal, 2016). This study aims at testing the influence of socio-economic variables on investment biases exhibited by individual investors residing in Sri Lanka.

Sophistication in trade also plays a major role in shaping investment biases (Feng et al., 2015). Trading experience and trading frequency falls under trading sophistication (Prosad et al., 2015). Individuals with more investment and experience in life / business to be the more sophisticated investors (Chen et al., 2003). Sophistication in trade also has an important role to play in shaping investment biases (Feng et al., 2015). This study drives at testing the impact of trading sophistication variables on the investment biases exhibited by individual investors residing in Sri Lanka.

Further, the importance of self-reflection term is increasingly recognized by the studies of Shantha (2019), Woerkom (2004) and Kember et al., (2000). Self-reflection which is also known as reflective learning, which is the procedure of investigating a matter of concern internally, started with an experience that generates and explains meaning in aspects of itself

(Boud, 1985). Shantha (2019) emphasized and tested foremost this term in determining herding bias.

Hence, the problem statement of this study can be depicted as follows:

“Do socio-economic, trading sophistication and self-reflection factors influence on individual investors’ investment biases?”

Literature Review

The disposition bias was first presented in the literature on finance by Shefrin & Statman (1985), and he refers to investors' tendency to ride losses and realize gains. Disposition bias is a major investment bias in which investors are more likely to sell the winning stock and tend to retain the loss-making asset (Kumar & Goyal, 2016). Studies of Kenny & Morgan (2013), Fogel & Berry (2006), and Barber & Odean (2001) note that individuals report of deploring keeping too long a losing stock and selling too early a winning stock. Furthermore, Jordan & Diltz (2004) empirically supported the theory that individuals have a tendency to be influenced by the disposition bias.

According to Kumar & Goyal (2016), most of the articles examined are secondary data based and are of an empirical nature. A few studies (Weber & Camerer, 1998; Fogel & Berry, 2006; Wong et al., 2006 ; Rubaltelli et al., 2005) used primary data through experiments to analyze the disposition bias. Further, in various research studies (Frazzini, 2006; Weber & Camerer, 1998 ; Barberis & Xiong, 2009; Odean, 1998 ; Barber & Odean, 2008 ; Shefrin & Statman, 1985 ; Ferris et al., 1988 ; Calvet et al., 2009 ; Gomes, 2005 ; Dhar & Zhu, 2006) empirical evidence for the disposition phenomenon has been generalized. Disposition bias increases with age; which means disposition bias is higher among older investors (Tekçe et al., 2016). According to Prosad et al. (2015) the disposition bias is presented by middle aged investors.

There are some studies which are been conducted to test whether gender impact on disposition bias. While Tehrani & Gharehkoollchian (2012) pointed out gender is the determinant of disposition bias, the studies of Tekçe et al. (2016), Hon-Snir et al. (2012) typically report that female investors are more influenced than their male counterparts by the disposition bias. In contrast the findings by Da Costa et al. (2008) argued that the effect of disposition in males is greater than females.

Profession also can be discussed under disposition bias. The highest disposition bias among all investors is shown by individuals working in non-professional jobs (Dhar & Zhu, 2006). Furthermore, as stated by Prosad et al. (2015) it concluded that one's profession is more closely associated with the effect of disposition.

Several studies have been conducted to test whether income determine the disposition bias. For example, Prosad et al. (2015) stated, income level influences disposition bias. Prosad et al. (2015) states high-income investors have a low disposition bias because rich investors have better access to expert financial advice for all their investments and are better able to handle the information (Isidore R, 2019). Similarly, Dhar & Zhu (2006) have also pointed out individuals who have low incomes show the highest disposition bias among all investors. However on contrary to these findings, Tekçe et al. (2016) argued that Wealth has a positive impact on disposition bias. However surprisingly, Lin (2011) concluded that the income has no considerable connection to the effect of disposition.

Trading sophistication and trading behavior together would lessen investment biases such as the disposition bias. Experienced traders in their trading decisions may be less prone towards disposition biases (see for example, Feng et al., 2015 ;Shapira & Venezia, 2001; Brown et al., 2006; Chen et al., 2007; Dhar & Zhu, 2006). Moreover, there is an opposite view indicating

that over experience lead to disposition bias (Aren et al., 2016). Tekçe et al. (2016) argued that experience has no statistically significant influence on the disposition bias. Studies of Feng et al., 2015; Prosad, 2014; Dhar & Zhu, 2006; Shapira & Venezia, 2001 and Brown et al., 2006 have discussed the influence of trading frequency on disposition bias.

Thus, the conceptual framework of the study is shown in Figure 1.

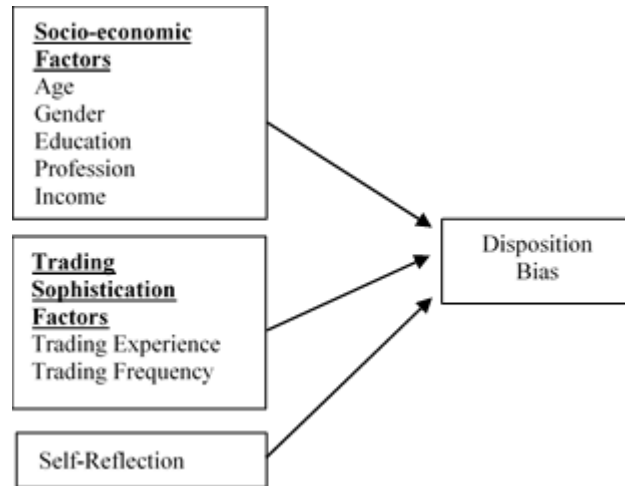


Fig 1: Conceptual Framework

Source: Author Compiled based on Literature

Thus, the following hypothesis are derived based on the conceptual framework.

- H₁:** There is a significant relationship between age and individual investors' disposition bias in CSE.
- H₂:** There is a significant relationship between gender and individual investors' disposition bias in CSE.
- H₃:** There is a significant relationship between education and individual investors' disposition bias in CSE.
- H₄:** There is a significant relationship between profession and individual investors' disposition bias in CSE.
- H₅:** There is a significant relationship between income and individual investors' disposition bias in CSE.
- H₆:** There is a significant relationship between trading experience and individual investors' disposition bias in CSE.
- H₇:** There is a significant relationship between trading frequency and individual investors' disposition bias in CSE.
- H₈:** There is a significant relationship between self-reflection and individual investors' disposition bias in CSE.

Methods

The present study is a cross-sectional study and quantitative method was used for data analysis. A questionnaire was designed and survey method is applied to obtain responses. The actual sample size for the study was 400 out of all individual investors in Sri Lanka, but few questionnaires were found which were not adequately filled. Therefore, only 243 questionnaires were found useful and selected as sample size. Convenience sampling technique was used to collect data from investors in Colombo Stock Exchange. The purpose of this research analysis is to interpret and draw a conclusion from the collected data. Inferential statistics, as well as descriptive statistics, are applied for data analysis. SPSS software was used for statistical computation. Firstly, Cronbach Alpha is applied to check the reliability of data. The range from 0.70 - 0.90 is acceptable. Then, One-way ANOVA and Independent sample t-Test are applied to identify the influence of socio-economic and trading sophistication on disposition bias. Finally, regression analysis is conducted to identify the influence of self-reflection on disposition bias.

Findings of the Study

This section is comprised of results and interpretation of the data. First, the Cronbach's alpha test for measurement of reliability was done. The results of the reliability test (Table 1) indicated that the value of Cronbach Alpha is 0.722. Therefore, the scale is reliable as the value of Cronbach alpha is more significant than 0.6.

Table 1: Reliability statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
.722	.717	5

Source: Survey Data

Investor's demographic profile

Descriptive statistics show that 83.5 percent of the respondents fall in the age group of 25-54 years (with 7.8 percent in the age group 17-24 years and in 55-64 years). The sample contains 84 percent males and 16 percent females. There are 32.1 percent respondents who have completed bachelor's degree and 12.3 percent respondents have completed postgraduate diploma. More than half of respondents have completed their professional qualifications in finance field (55.6 percent) with 34.6 percent have the monthly income between Rs. 40,000 and Rs. 79,999. Professionally, 39.5 percent respondents are financial experts, 56.8 percent are in the private sector, 35.8 percent are in the government sector, 5.3 percent are self-employed, and the rest belong to the non-government sector (2.1 percent). The largest number of respondents have less than or equal four years work experience (39.5 percent). It is seen that the trading experience of 37.9 percent respondents is 2 years or less than 2 years, 34.2 percent have an experience of three to seven years and 17.3 percent have an experience of eight years to twelve years. Finally, the frequency of trading of 48.6 percent is occasional, 19.8 percent have a trading frequency of initial public offerings/ special issues only and 5.3 percent are daily traders. The results are shown in Table 2.

Table 2: Investor's demographic profile

Summary Statistics	Code	Count	%	Cumulative (%)
<i>Gender</i>				
- Male	1	204	84%	84%
- Female	2	39	16%	100%
<i>Age group in years</i>				
- 17-24 years	1	19	7.8%	7.8%
- 25-54 years	2	203	83.5%	91.3%
- 55-64 years	3	19	7.9 %	99.2%
- 65 years and over	4	2	0.8%	100%
<i>Highest Academic Qualification</i>				
- Advanced Level	1	61	25.1%	25.1%
- Diploma	2	43	17.7%	42.8%
- Bachelor's degree	3	78	32.1%	74.9%
- Postgraduate Diploma	4	30	12.3%	87.2%
- Master's degree	5	26	10.7%	97.9%
- Doctoral Degree	6	05	2.1%	100%
<i>Fields of Professional Qualification</i>				
- Finance field	1	108	44.4%	44.4%
- Non-finance field	2	135	55.6%	100%
<i>Current Employment Sector</i>				
- Government Sector	1	87	35.8%	35.8%
- Private Sector	2	138	56.8%	92.6%
- Self-employed	3	13	5.3%	97.9%
- NGOs	4	5	2.1%	100%
<i>Work Experience in Current Profession</i>				
- Equal or Less than 4 Years	1	96	39.5%	39.5%
- 5-9 Years	2	61	25.1%	64.6%
- 10-14 Years	3	48	19.8%	84.4%
- 15-19 Years	4	18	7.4%	91.8%
- 20-24 Years	5	13	5.3%	97.1%
- 25-29 Years	6	02	0.8%	97.9%
- More than or equal 30 Years	7	05	2.1%	100%
<i>Monthly Income</i>				
- Less than Rs. 40,000	1	26	10.7%	10.7%
- Rs. 40,000 – Rs. 79,999	2	84	34.6%	45.3%
- Rs. 80,000 – Rs. 119,999	3	31	12.8%	58.1%
- Rs. 120,000 – Rs. 160,000	4	58	23.9%	82%
- More than Rs. 160,000	5	44	18%	100%
<i>How long have you been investing in the stock market (in years)?</i>				
- 2 years or less	1	92	37.9%	37.9%
- 3–7 years	2	83	34.2%	72.1%
- 8–12 years	3	42	17.3%	89.4%
- 13–17 years	4	17	7%	96.4%
- 18 years or above	5	09	3.6%	100%
<i>How often do you buy or sell stocks?</i>				
- Occasionally	1	118	48.6%	48.6%
- Once a month	2	23	9.5%	58.1%

Summary Statistics	Code	Count	%	Cumulative (%)
- Once a week	3	09	3.7%	61.8%
- 2-3 times a week	4	32	13.2%	75
- Daily	5	13	5.3%	80.3%
- Initial public offerings/ Special issues only	6	48	19.7%	100%

Source: Survey Data

Table 3: Independent Sample t-Test Results

	Levene's Test for Equality of Variances (F)	t-test for Equality of Means (sig.)
Gender	.107	.126
Profession	.457	.459

Source: Survey Data

The analysis mentioned above (Table 3) shows whether disposition bias is different between male and female investors. As well as whether disposition bias is different between finance field profession and non-finance field profession of investors. The results show gender and profession do not vary with disposition bias.

Table 4: One-Way ANOVA Results

Socio-economic Variables	Value
Age	.037*
Education	.000*
Income	.000*
Trading Experience	.000*
Trading Frequency	.000*

Source: Survey Data

The One-way ANOVA test reveals that the respondents belonging to all levels of age, education, income, trading experience and trading frequency are highly vulnerable as they are prone to disposition bias.

Table 5: One-Way ANOVA - Age Group Mean Statistics

Education Levels	Mean Value
17-24 Years	3.26
25-54 Years	3.31
55-64 Years	3.49
65 Years and over	4.20

Source: Survey Data

The findings convey that age is a significant factor for the individual investors' disposition bias when making stock selections in CSE. It is implied that; investors who get older are more prone to disposition.

Table 6: One-Way ANOVA - Education Group Mean Statistics

Education Levels	Mean Value
A/L	3.46
Diploma	3.32
Bachelor's Degree	3.11
Postgraduate Diploma	3.07
Master's Degree	3.02
Doctoral Degree	3.00

Source: Survey Data

According to the results shown in Table 6, investors who are more educated are less prone to disposition bias while less educated investors are more prone to disposition bias.

Table 7: One-Way ANOVA – Income Group Mean Statistics

Income Levels	Mean Value
Less than Rs.40,000	3.65
Rs.40,000-Rs.79,999	3.57
Rs.80,000-Rs.119,999	2.90
Rs. 120,000-Rs. 160,000	2.09
More than Rs. 160,000	2.00

Source: Survey Data

According to the results shown in Table 7, disposition bias is seen with respect to investors whose income level is very low. It is implied that, the high-income investors exhibit a low disposition bias, because the rich investors have better access to expert financial advice for all their investments and are more capable of processing the information (Isidore R, 2019).

Table 8: One-Way ANOVA – Trading Experience Group Mean Statistics

Experience Levels	Mean Value
2 Years or Less	3.44
3 -7 Years	3.38
8 – 12 Years	2.99
13 – 17 Years	2.25
18 Years or above	2.24

Source: Survey Data

According to the results shown in Table 8, experienced traders may be less inclined toward dispositional biases in their trading decisions.

Table 9: One-Way ANOVA – Trading Frequency Group Mean Statistics

Frequency Levels	Mean Value
Occasionally	3.98
Initial public offerings/special issues only	3.85
Once a month	3.79
Once a week	2.71
2-3 times a week	2.61

Daily	2.42
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Source: Survey Data

Accordingly, the results (Table 9) of the current study also depict that, investors who trade less frequently are more prone to disposition bias.

Regression Analysis

A regression describes and evaluates the impact of self-reflection on disposition biases.

Table 10: Simple Linear Regression Results for Disposition Bias

	B	t	Sig.	VIF
(Constant)	2.488	7.355	.000	
Self-reflection	-.217	2.594	.010*	1.000

Source: Survey Data

$$DB = \beta_0 + \beta SR + e$$

$$DB = 2.488 - 0.217SR + e$$

The study results (Table 10) confirmed that, when self-reflection increases by one unit, disposition bias will decrease by 0.217 as a result. It means, investors who are self-reflected about their own past are not prone to disposition bias when making investment decisions, whereas self-reflection of investors reduces disposition bias when trading stocks.

Discussion and Recommendation

In this research study, researcher has investigated the influence of investors' socio-economic variables, trading sophistication factors and self-reflection factor on individual investors' disposition bias.

Moreover, the findings (Table 4) of the current study convey that age is a significant factor for the individual investors' disposition bias when making stock selections in CSE. It is implied that; investors who get older are more prone to disposition (Table 5). This finding is also consistent with the Tekçe et al. (2016). Accordingly, the study showed that disposition bias increases with age and disposition bias is higher among older investors. Prosad et al. (2015) proposed contrary to the results of this study that, disposition bias is presented in middle aged investors.

According to the findings (Table 3) of this study it was confirmed that, investors' gender does not influence the disposition bias as pointed out by Prosad et al. (2015). As Tekçe et al. (2016) and Hon-Snir et al. (2012) found that female investors are more affected by disposition bias than their male counterparts. On the other hand, Tehrani and Gharehkooolchian (2012) and Da Costa et al. (2008) found that the effect of disposition in males is greater than females.

According to other results (Table 6), investors who are more educated are less prone to disposition bias while less educated investors are more prone to disposition bias. There are several studies supporting these results as educated investors afford to spend on financial advice and thereby reduce the bias (Isidore R, 2019), Investors with more education have a lower disposition bias (Goo et al., 2010), Educated individuals are less inclined to being

influenced by disposition bias and can more efficiently rebalance their portfolio (Calvet et al., 2009).

According to the results (Table 3) of present study, investors' profession does not influence on investors' disposition bias. However, this result contradicts the findings as individuals who work in nonprofessional occupations show the highest disposition bias among all investors Dhar and Zhu (2006) and Prosad et al. (2015).

Similarly, this study result (Table 7) found that disposition bias is seen with respect to investors whose income level is very low. It implied that, the high-income investors exhibit a low disposition bias, because the rich investors have better access to expert financial advice for all their investments and are more capable of processing the information (Isidore R, 2019). Further, similar study carried out by Dhar and Zhu (2006) also conveyed that, the individuals who have low income show the highest disposition bias among all investors. However, these findings contradict the research outcomes of Tekçe et al. (2016) and Prosad et al. (2015) which emphasized that the wealth has a positive impact on disposition bias. Another finding according to Lin (2011) pointed out there are no significant relation with disposition bias.

It was found that (Table 8) experienced traders may be less inclined toward dispositional biases in their trading decisions. Further, similar study carried out by Dhar and Zhu (2006); Feng et al. (2015); Shapira and Venezia (2001) and Brown et al. (2006) also conveyed that, trading experience can reduce behavioral biases like the disposition bias. However, these findings contradicts the research outcomes of Tekçe et al. (2016) study revealed that, trading experience do not have a statistically significant impact on the disposition bias.

Accordingly, the results (Table 9) of the current study it also depicts that, investors who trade less frequently are more prone to disposition as shown by Dhar and Zhu (2006) and Shapira and Venezia (2001) and Brown et al. (2006).

The study results (Table 10) confirmed that, investors who are self-reflected about their own past are not prone to disposition bias when making investment decisions, whereas self-reflection of investors reduces disposition bias when trading stocks. Therefore, the findings of this study confirm that the investors' learning from their past experiences is the main reason for disposition bias to decrease. Accordingly, it is evident that investors have learned the irrationality of dispositioning from their past experiences. Therefore, they tend to shift away from such irrational behavior when trading stocks. Hence, it was originally discussed under this research study.

Behavioral finance is a rapidly growing arena, but in developing countries, such as Sri Lanka, it is still at an emerging stage. This study has certain relevant implications for financial practitioners in making stock selection decisions. It can be suggested that a good grasp of this area will equip the practitioners not just to recognize other mistakes but their own mistakes as well. It facilitates financial advisors to become more effective by understanding their clients' psychology. It will aid them in developing behaviorally modified portfolios, which best suits their clients' predisposition. It helps investment bankers in understanding the market sentiments as they make public issues for their companies. It assists the financial strategists in making better forecasts and security analysts for recommending stocks. Finally, the knowledge of disposition bias is required for individual investors in the pursuit of making sensible and effective financial decisions.

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The Impact of Exchange Rate Movements on Stock Returns: Evidence from Commercial Banks in Sri Lanka

Bandara, A. W. M. S. S. C.¹ and Thilakarathne, P. M. C.²

Foreign exchange rate is the price of the local currency stated in terms of another currency. Exchange rate movements is a crucial cause which creates risk in banking institutions. This paper investigates the impact of exchange rate movements on stock returns of commercial banks listed in Colombo Stock Exchange. Data were extracted from the Central Bank of Sri Lanka (CBSL) and Colombo Stock exchange (CSE). Data were analyzed using linear regression analysis for the period of July 2013 to June 2018 using monthly observations. The results of the study indicate that there is significant exposure of Sri Lankan commercial banks to exchange rate movements of US Dollars, Japanese Yen and Market Rate of Return. All banking institutions from the selected sample banking firms are sensitive to the US Dollar exchange rate movements. As per the results, depreciation of domestic currency value against US Dollar delineates negative as well as impact on stock returns of the selected banking institutions. Moreover, Japanese Yen exchange rate movement found to be sensitive towards two of the selected banks stock returns. Results indicate that movements in Japanese Yen exchange rate affects stock returns of respective banking institutions either positively or negatively. None of the selected banks stock returns are sensitive to Euro and Great Britain Pounds exchange rate movements. Importantly Market rate of return is found to sensitive towards the stock return generating process of all the selected banking institutions.

Keywords: *Commercial Banks, Exchange Rates, Sri Lanka, Stock Returns*

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¹ Ernst and Young, Sri Lanka (sandunischapa@gmail.com)

² Department of Accountancy, University of Kelaniya, Sri Lanka

Introduction

This study investigates the impact of exchange rate movements on stock returns of commercial banks in Sri Lanka. Studies on foreign exchange movements have gained much attention in the literature recently because we operate in an open economy as a result of natural endowment. Activities in foreign exchange market determine the attractiveness of a nation's currency and the level of development of that economy. Banks performance contributes enormously to the economic growth of a country by making funds available for investors to borrow and financial deepening (Osundina, et al., 2016). This happens as a result of the market not only being a vehicle of settling international transactions but by functioning also as a medium of interaction between sellers and buyers of foreign exchange in a bid to negotiate a mutually acceptable price for the promotion and continuance of international transactions (Osundina, et al., 2016). Due to the central role of banks in the financial intermediation, banks are immensely affected by the foreign exchange market. Hence, this study evaluated the impact of exchange rate movements, for the period of 2013 to 2018 using monthly observations.

Foreign exchange rate can be defined as the price of the local currency stated in terms of another currency. It is widely held that foreign exchange rate is important financial and economic factor which affects the value of common stocks. Movements in the foreign exchange rates can directly affect value of the firms by affecting current and future cash flows of the firms. As per Jorion (1990) exchange rates are a major source of uncertainty for multinationals, being typically four times as volatile as interest rates and 10 times as volatile as inflation. Most traded currencies are determined on the basis of volume of transactions denominated in foreign currencies such as US Dollar, Euro, Japanese Yen and Great Britain Pounds. Over the past few years' exchange rates have been drastically changing resulting depreciation of Sri Lankan Rupee (SLR) against major currencies traded in Sri Lanka such as United States Dollars, Euro, Great Britain Pounds and Japanese Yen. Exchange rate is not only influencing the stock prices and thereby to stock returns, but also other macro-economic variables such as interest rate, inflation rate, GDP growth rate are also affected by the stock return generating process of companies. However due to the contemporary importance of exchange rate movements in Sri Lanka exclusively this research focuses on the impact of exchange rate movements on the stock returns.

Exchange rate movements is a crucial cause in creating risk in banking institutions. In the worst case, large foreign exchange losses could lead to bank failures besides causing huge encumbrances on banks' performance. Commercial banks accounts for the highest share of the total assets in the financial system. When considering past few years, there is a growth in commercial banks in Sri Lanka and this is evident through the increase of commercial banks in 2018 up to 26 banks. Exchange rate in Sri Lanka has been drastically changed over the past few years with rapid depreciation of the domestic currency Sri Lankan Rupees, which adversely affect the Sri Lankan economy. Commercial banks are more vulnerable to exchange rate movements since they are dealing with foreign exchange transactions. Even without such activities banks are exposed to foreign exchange movements. Thereby this study selected the commercial banks as the study area. Numerous studies (Ahmed, 2015; Chamberlain, et al., 1997; El-Masry, 2006; Mozumder, et al., 2015; Wong, et al., 2008) have been done in international context to find out the impact of exchange rate movements on the stock returns and value of the firms. The behavior of macroeconomic variables and their influence on stock returns of developed countries differ widely in Sri Lankan context. Furthermore, there is dearth of literature relevant to the investigation of impact of exchange rate movements on the stock returns pertaining to Sri Lankan context to the best of the researchers' knowledge. This study therefore seeks to fill this gap by seeking answer to the following research question;

what is the impact of exchange rate movements on the stock returns of commercial banks in Sri Lanka?

Literature review

Jorion (1990) measured the exposure of the US multinational companies to foreign currency risk. In his study he stated that the effect of the exchange rate risk may be measured by means of regression coefficients. The researcher has used the time series regression to obtain the exposure coefficient including variables of common stock return as dependent variable and the rate of change in a trade-weighted exchange rate, measured the end of the period dollar price of the foreign currency and market index as independent variables. The study has employed monthly data for the sample period of 1971 to 1987. Results indicated that the relationship between stock returns and exchange rates differs systematically across multinationals. The movement between stock returns and the value of the dollar is found to be positively related to the percentage of foreign operations of U.S. multinationals. Conversely, exposure without foreign operations does not appear to differ across domestic firms.

Chamberlain et al (1997) investigated the exchange rate exposure on the stock prices of U.S. and Japanese banking institutions using daily observations for the period of June 1986 to June 1993. Study used the augmented market model which is similar to the model adopted by Jorion (1990). The researcher has studied the exposure coefficients based on individual firm level data and exchange rate exposure has measured using time series regression analysis. Using daily data, they found that the stock returns of approximately one-third of thirty large U.S. bank holding companies appear to be sensitive to exchange rate changes.

Merikas (1999) investigated the structural relationship between the exchange rate exposure and the stock return value of Greek banking institutions. Researcher used an augmented market model since exchange rate is not the only parameter or even the most significant one in determining exchange rate exposure. The empirical results show that the stock returns of the Greek banks are affected differently from the variation of the three major currencies USD, DEM and YEN against the Greek Drachma (GRD) and these differences are subject to asset and liability structure of each individual bank as well as its management team.

Williamson (2001) examined the effect of real exchange rate changes on multinational firms and incorporates the effect of intra-industry competition on the relation between exchange rates and firm value. Researcher used the monthly observations for sample of automotive firms from the United States and Japan for the period of 1973 to 1975. Study used the regression model to analyze the data and model adopted by the study is consistent with the model used by Jorion (1990). Results of the study indicates that at the firm level there is evidence of significant exchange rate exposure for certain firms and insignificant levels for other firms that is consistent with theories of the determinants of exposure. F-tests of differences in exposure across firms show that there are significant differences in exposure to exchange rate shocks across firms from the same country.

Thilakerathne (2001) investigates the influence of the exchange rate on the banking sector's stock return in Greece and Sri Lanka by employing multivariate regression analysis for the period of August 1995 to November 1998 using daily observations. The researcher used stock return of each individual banking institution as dependent variable and US Dollar, Japanese Yen, Deutsche Mark exchange rates and market rate of return as independent variables for measuring the effect of exchange rate on stock return of commercial banks. Model adopted by the study is consistent with the model of Jorion (1990). The study found that significant contemporaneous and lagged exposure coefficients in both markets suggesting an

appreciation (depreciation) of the domestic currency value (Greek drachma/Sri Lankan Rupee) against three major currencies (USD, DEM and JP Yen) has a positive (negative) impact on stock returns of the respective banking institutions. The researcher has studied the exposure coefficients based on individual firm level data.

Mozumder et al (2015) studied the sensitivity of firm value to exchange rate movements and the determinants of such exposure for 100 European blue chip companies. The study has used the two factor model used by Jorion (1990) where dependent variable is stock returns and independent variables are percentage changes in exchange rates and market portfolio returns. Research findings indicate that a depreciation/increase (indirect quotation) of USD-euro and USD-GBP exchange rates has a positive impact on the market value of both Eurozone and non-Eurozone (UK) firms and which indicate that there is no major difference between them and in total, 20 per cent of financial firms and 16 per cent of non-financial firms have significant exchange rate exposure across the full sample period.

Findings of Chamberlain et al (1997), Williamson (2001) and Thilakerathne (2001) are consistent with each other where those findings indicate that stock returns are sensitive to the changes in exchange rates. Since all those studies analyzed the data in individual firm level analysis results suggested that some individual firms are highly sensitive to the exchange rate movements while some are not much sensitive to the exchange rate movements. Further, models adopted by those studies (Chamberlain et al. 1997; Williamson, 2001; Thilakerathne, 2001) are similar to the model of Jorion (1990) which include market rate of return in addition to the exchange rates.

Several studies have investigated the impact of foreign exchange rate on companies including commercial banks in international context. Due to macro-economic variables behavior in Sri Lanka those results of international research work may not be applicable for Sri Lanka. Having done literature review on this research issue, the researcher was able to identify the existing research gap. There is a dearth of literature relevant to the impact of exchange rate movements of stock returns pertaining to Sri Lankan context to the best of the researcher's knowledge. This study therefore seeks to fill this gap by seeking to determine the impact of exchange rate movements on stock returns of commercial banks in Sri Lanka.

Methodology

The study adopted a descriptive research design. Descriptive research design was more appropriate because the study sought to build a profile on the effects of exchange rate movements on stock returns of commercial banks in Sri Lanka. This research is a descriptive study where the data are extracted from the Colombo Stock Exchange (CSE) and Central Bank of Sri Lanka (CBSL).

The target population of this study consists of 26 Licensed commercial banks operating in Sri Lanka as at 16th March 2018 as per the Central Bank of Sri Lanka web site (www.cbsl.gov.lk). Out of the population, 09 listed commercial banks has been selected due to availability of complete trading information for the July 2013 to June 2018. As a result, the sample consists of 540 firm/monthly observations. These banks are Commercial Bank of Ceylon PLC, DFCC Bank PLC, Hatton National Bank PLC, National Development Bank PLC, Nations Trust Bank PLC, Pan Asia Banking Corporation PLC, Sampath Bank PLC, Seylan Bank PLC and Union Bank of Colombo PLC. Thus, the sample does not include the unlisted commercial banks and Amana bank due to unavailability of data.

This study uses secondary sources of data regarding the variables. Individual stock returns, All Share Price Index (ASPI) were extracted from the Colombo Stock Exchange (CSE) data

files and bilateral nominal exchange rates of SLR/USD, SLR/JPY, SLR/EUR and SLR/GBP were extracted from Central Bank of Sri Lanka website (www.cbsl.gov.lk).

Research hypothesis is as below.

H₁: Exchange rate movements influence the stock returns of commercial Banks in Sri Lanka.

Conceptual Framework

The conceptual framework is developed from the review of literature discussed above and presented in the following diagram (figure 1). Through conceptualization, one may identify the relationship between Dependent and Independent variables that are taken into consideration.

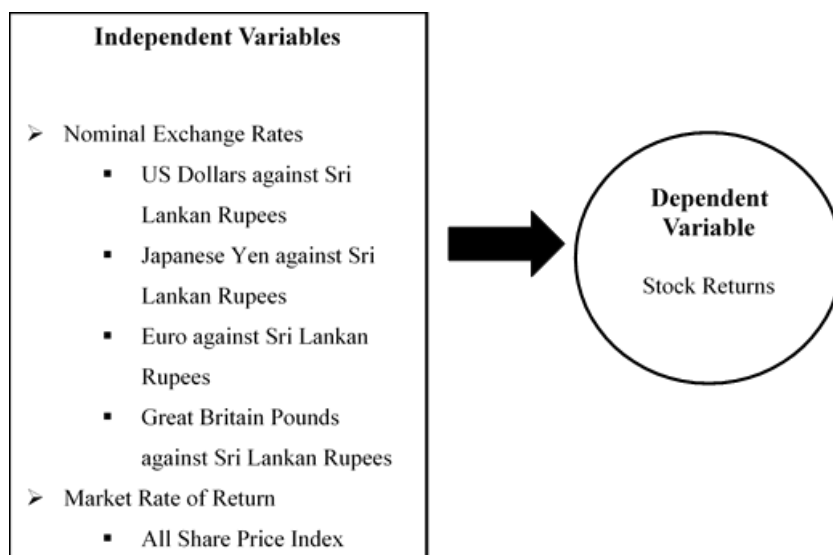


Figure 1: Conceptual Framework

Operationalization of the variables

Dependent Variable

Stock Returns

Stock returns of each individual banking institution over the sample period of July 2013 to June 2018 is used as dependent variable of the study. Stock returns are computed using month end stock price and month beginning stock price. Dividends are excluded when computing the stock returns since the study uses the monthly stock returns data and it is not practicable to include dividends in computation.

$$\text{Stock Returns} = \text{Month end stock value} - \text{Month Beginning stock value}$$

Independent Variables

Nominal exchange rates and market rate of return were selected as independent variables of the study. Most traded currencies are determined based on volume of transactions denominated in foreign currencies such as US Dollar, Euro, Japanese Yen and Great Britain Pounds.

Thereby this study selected exchange rate movements of those currencies as one of the independent variable of the study. To improve the explanatory power of the model study includes the market rate of return as another independent variable in line with previous literature since exchange rate is not only factor which affects to the stock returns.

Nominal Exchange Rates

The influence of the exchange rate effect on the banking sectors stock returns cannot be studied in isolation with single foreign exchange rate, rather it needs to consider the multiple of currencies (Thilakerathne, 2001). The currencies and for that matter the exchange rates chosen for the study were those widely used in international transactions in Sri Lanka. Major foreign currencies such as the US Dollars (USD), Japanese Yen (JPY), Euro (EUR) and Great Britain Pounds (GBP) are used as independent variables since international transactions are mainly handled in such major currencies.

Majority of previous studies (Chamberlain, et al., 1997; Merikas, 1999; Thilakerathne, 2001; Atindéhou & Jean-Pierre Gueyie, 2001; Mozumder, et al., 2015) had used nominal exchange rates and bilateral rates to capture the wide spectrum of foreign exchange variation. Therefore, this study uses the nominal exchange rates of USD/LKR, JPY/LKR, EUR/LKR and GBP/LKR as dependent variables.

Market Rate of Return

As per Thilakerathne (2001) exclusion of other risk factors (except the exchange rate) in exposure model underestimates the true exposure. Exchange rate is not the only parameter or even the most significant one in determining exchange rate exposure. Previous studies (Choi, et al., 1992; El-Masry, 2006; Jorion, 1990; Merikas, 1999; Thilakerathne, 2001; Salifu, et al., 2007) conducted in the area emphasized the importance of incorporating the market rate of return in the exposure model. Therefore, reseracher has included the All Share Price Index (ASPI) of Colombo Stock Exchange as independent variable.

Analytical Model and Data Analysis Strategies

Since there is time series data available in the data set time series regression were applied to implement the analysis. This study uses the multi factor model which is consistent with two factor model of Jorion (1990) which is widely used by previous research studies (Chamberlain, et al., 1997; Chan, et al., 2002; El-Masry, 2006; Merikas, 1999; Mozumder, et al., 2015; Salifu, et al., 2007; Thilakerathne, 2001; Williamson, 2001; Vivel-Búa & Lado-Sestayo, 2018) relevant to the study area. Thereby this study uses the following multiple regression model which is suggested by Thilakerathne (2001) in his study.

Equation 1

$$R_{it} = \alpha + \beta_1 EX_1 + \beta_2 EX_2 + \beta_3 EX_3 + \beta_4 EX_4 + \beta_5 MRT + \epsilon_i$$

The Model

Equation 2

$$R_{it} = \alpha + \beta_1 \ln(\text{USD}) + \beta_2 \ln(\text{JPY}) + \beta_3 \ln(\text{Euro}) + \beta_4 \ln(\text{GBP}) + \beta_5 \ln(\text{MRT}) + \epsilon_i$$

All the variables are expressed in natural logarithm terms except for the stock returns.³

Where,

R_{it} = Stock Returns of each individual banking institution

α = Constant term

$\beta_1, \beta_2, \beta_3, \beta_4$ = Regression coefficients which measures the sensitivity of movement in US Dollars, Japanese Yen, Euro and Great Britain Pounds exchange rates for bank i at time t .

USD = Nominal Exchange Rate of US Dollars against Sri Lankan Rupees

JPY = Nominal Exchange Rate of Japanese Yen against Sri Lankan Rupees

Euro = Nominal Exchange Rate of Euro against Sri Lankan Rupees

GBP = Nominal Exchange Rate of Great Britain Pounds against Sri Lankan Rupees

MRT = Market rate of return (All Share Price Index)

ϵ_i = Random error term

Analysis and Discussion of Results

Descriptive Statistics

Maximum and the minimum in the expressive figures show the maximum and minimum value of the specific data that is of 540 observations. Mean shows the arithmetic mean across the observations. It is the most widely used measure of central tendency. It is commonly called the average. The mean is sensitive to extremely large or small values. Standard deviation measures the spread of a set of explanations. Larger the standard deviation is, the more spread out the observations and smaller the standard deviation is, the lowest spread out the observations. The average (mean) of USD, JPY, Euro and GBP found to be 141.873, 1.288937, 168.113 and 205.891, and respectively. Average mean for the ASPI series is found to be 6543.676. Skewness value of stock returns of individual banking institutions and explanatory variables are all around 0 and Kurtosis value is around 3. Jarque Bera probability value for all the variables are more than 0.05 indicating normality of the data set.

Testing Time Series and Linear Regression assumptions

An evaluation of the normality of population sample is essential for many statistical analysis as normal data is a fundamental hypothesis in parametric testing. To measure normality “Jarque – Bera” statistic technique is used by researchers. The Jarque-Bera Test, a type of Lagrange multiplier test, is a test for normality. While testing for normality:

- Probabilities > 0.05 mean sample data are normal.
- Probabilities < 0.05 mean sample data are NOT normal

Researcher tested normality of each banking institution and probability values for each banking institution is insignificant for the Jarque-Bera test at 5% level. Therefore, null

³ Logarithmic transformations are often used in time series analysis as a means of removing growth over time in the variance of data. On the other hand, using natural logarithm for variables (to the base $e=2.71828$ denoted by \ln) make easier to interpret the economic relationships.

hypothesis cannot be rejected and accepted the null hypothesis which is the given data set is normally distributed. Skewness is a measure of asymmetry of the distribution of the series around its mean. In the generated results value for skewness is near to zero in every individual banking institution. Therefore, it is close to the zero and skewness is there in the sample data set.

Unit root tests are important in examining the stationary of time series. In general, a stationary series is considered to have a constant mean and variance and time invariant co-variances. An augmented Dickey–Fuller test (ADF) tests the null hypothesis that a unit root is present in a time series sample. According to the Augmented Dickey-Fuller test results, it indicates that stock return data relevant to individual banking institutions does not have unit root and stock return has stationarity at the level condition. Results of ADF test indicates probability values is less than the 5%. According to the results it concludes that research reject the null hypothesis (H0) and accept the alternative hypothesis (H1). The USD data, Euro data, JPY data, GBP data and ASPI data do not have unit root and has stationarity at the first difference condition. The results show that all the variables are not stationery at the levels except stock return data and rejects the null hypothesis of non-stationery after the variables has been first differenced.

Correlation is a bivariate analysis that measures the strength of association between two variables and the direction of the relationship. The correlation coefficient measures the strength of linear association between two or more variables. It ranges from -1.0 to +1.0. Closer the coefficient is to +1 or -1, more closely related are the two variables. A correlation coefficient of zero indicates that there is no linear relationship between variables. The direction of the relationship is indicated by the sign of the coefficient; a positive (+) sign that indicates a positive relationship and a negative (–) sign indicates a negative relationship. As per correlation matrix results, correlation between stock returns of all the banking institutions and USD exchange rate indicates negative relationship. Correlation between stock return and JPY exchange rate indicates positive relationship for some of the banks and negative for some of the banks. Correlation between stock return and euro exchange rate shows positive relationship for majority of the banks and few banks reported negative relationship. Correlation between stock return and GBP exchange rate for all of the banks reported as positive. Correlation between stock return and All Share Price Index for all the selected banking institutions are reported as positive.

Multi collinearity outlines that there is linear relationship between explanatory variables which may affect the regression model biased. The researcher used the correlation matrix to test the multi collinearity of explanatory variables. According to the results none of the independent variables are highly correlated with each other except Euro exchange rates and Japanese Yen. As a rule of thumb, if the inter-correlation among the independent variables are higher than 0.8, it outlines that there is multi collinearity between independent variables. All the pair wise correlations are below the 0.8, therefore, there is no any multi collinearity between independent variables.

Autocorrelation is a mathematical sign of the degree of similarity between a given time series and a lagged version of itself over successive time intervals. The Durbin-Watson (D-W test) statistic is always between 0 and 4. A value of 2 means that there is no autocorrelation in the sample. D-W test results of all the individual banking institutions are in-between 1.5 to 2.5. The rule of thumb is when data set shows value which is close to 2, the auto correlation issue is not included. Therefore, results show Durbin Watson value is closer to 2, which means there is no auto correlation issue in the considered variables.

Discussion of Results

This study has examined the impact of exchange rate movements on the stock returns of commercial banks in Sri Lanka. Stock returns are taken as the dependent variable and nominal exchange rates and market rate of return were taken as independent variables. The results of the study indicate that there is significant exposure of Sri Lankan commercial banks to major exchange rate movements suggesting that depreciation of domestic currency value (Sri Lankan Rupee) against US Dollars delineates negative as well as impact on stock returns of the respective banking institutions. In addition to that results suggest that Japanese Yen exchange rate movements are sensitive towards the Commercial Bank of Ceylon Plc and Nations Trust Bank. Exposure coefficients of Japanese yen found to be negative for the Commercial bank and positive for the Nations Trust Bank suggesting that changes in Japanese Yen will either negatively or positively affect to the stock returns of respective banking institutions. It is important to note that all the considered banks stock returns are sensitive to the changes in market rate of return. Results indicates that banks are mainly exposed to the US Dollar exchange rate movements. None of the selected banking institutions found to be sensitive towards the Euro exchange rate movements and Great Britain Exchange rate movements. However, existence of insignificant exposure coefficients does not mean that banking institutions are not exposed to the exchange rate movements. A fundamental feature in this study is that exchange rate movements like any other macroeconomic factor should have varying effects on the individual banking institutions. Therefore, the reported variation of exposure coefficients of individual banking institutions reflects differences that exist among the banking institutions. A selected sample of banks to the study belongs to the same line of business fundamentally. Anyhow within the banking institutions there may be differences in activities and their directions. The difference between the exchange rate sensitivities of individual banking firms may be attributable to several factors: differences in the structure of ownership, in securities and derivatives laws, in supervision, in the extent of foreign ownership, or in hedging policies. Thereby signs and magnitudes of the exposure coefficients differ among individual banking institutions.

Findings of the study indicates that movements in exchange rates have significant impact to the stock returns. These findings are in-line with the findings of Atindéhou & Jean-Pierre Gueyie (2001), Thilakerathne (2001), Mozumder et al (2015) and El Masry (2006) who found that exchange rate movements have significant impact on the stock returns of the sample studied. However those results are contradicting to the results of Chan et al (2002) and Joseph & Panayiotis (2006) who suggest that changes in exchange rate do not appear to have significant impact on the stock returns.

As per results, all the banking firms considered for the study found to be sensitive towards the changes in market rate of return. This result is agreeing to the results of Hyde (2007) but contradicting to the results of Thilakerathne (2001) who found that market rate of return is not sensitive to the stock returns of individual banking firms.

Based on the results found study researcher rejects the null hypothesis and accepts the alternative hypothesis of exchange rate movements influence the stock returns of commercial Banks in Sri Lanka. The results of the OLS estimations are reported in table 1.

Table 1: Results of Individual Banking Institutions

$$R_{it} = \alpha + \beta_1 \ln(\text{USD}) + \beta_2 \ln(\text{JPY}) + \beta_3 \ln(\text{Euro}) + \beta_4 \ln(\text{GBP}) + \beta_5 \ln(\text{MRT}) + \varepsilon_i$$

Bank	α	β_1	β_2	β_3	β_4	β_5	R2	F-Stat	D-W Stat
1.Commercial Bank of Ceylon PLC	(-0.532)	(-0.517)*	(-0.327)**	0.172	(-0.264)	0.403*	0.239	3.388	2.485
	(-0.390)	(-3.600)	(-1.74)	0.935	(-1.369)	3.053			
2.DFCC Bank	(-2.473)	(-0.501)**	(-0.257)	0.302	(-0.178)	0.488**	0.247	3.551	2.157
	(-1.559)	(-2.998)	(-1.175)	1.408	(-0.796)	3.183			
3.Hatton National Bank PLC	(-1.505)	(-0.296)**	0.274	(-0.002)	(-0.085)	(-0.385)*	0.180	2.363	2.123
	(-1.202)	(-2.242)	1.586	(-0.016)	(-0.484)	(-3.177)			
4.National Development Bank PLC	(-1.305)	(-0.516)**	0.253	0.233	(-0.124)	0.371**	0.190	2.528	2.248
	(-0.750)	(-2.812)	1.056	0.992	(-0.505)	2.203			
5.Nations Trust Bank PLC	(-2.890)	(-0.437)**	0.416**	0.139	(-0.043)	0.509**	0.322	5.137	2.307
	(-2.379)	(-3.413)	2.484	0.846	(-0.254)	4.338			
6.Pan Asia Banking Corporation PLC	(-5.698)**	(-0.422)**	0.505	(-0.098)	0.384	0.697**	0.284	4.291	2.374
	(-2.859)	(-2.010)	1.838	(-0.365)	1.362	3.614			
7.Sampath Bank PLC	(-1.665)	(-0.249)***	0.195	0.139	(-0.227)	0.382**	0.145	1.824	1.975
	(-1.219)	(-1.731)	1.034	0.751	(-1.177)	2.895			
8.Seylan Bank PLC	(-1.275)	(-0.421)**	0.268	0.078	-0.124	0.405**	0.172	2.248	2.027
	(-0.825)	(-2.588)	1.256	0.374	-0.565	2.711			
9.Union Bank of Colombo PLC	(-1.609)	(-0.445)**	0.212	0.253	(-0.158)	0.376**	0.158	2.041	2.483
	(-0.918)	(-2.409)	0.875	1.064	(-0.639)	2.222			

Notes- *Significant at 1 percent, **5 percent and ***10 percent levels respectively. The t statistics is provided underneath of the regression coefficient

Conclusion and Recommendations

In this study researcher investigated whether there exists any relationship between banking institutions stock returns and exchange rate movements using a sample of 09 commercial banking firms listed in Colombo Stock Exchange of Sri Lanka. Researcher used monthly data of stock returns, exchange rates and market rate of return data for the period of July 2013 to June 2018 extracted from the Colombo Stock Exchange and Central Bank of Sri Lanka. Using time series data, by employing multivariate regression, researcher found that Sri Lankan banking firms are affected differently by exchange rate movements due to major currencies namely, US Dollars, Japanese Yen, Euro and Great Britain Pounds and Market Rate of Return.

The results of the study indicate that there is significant exposure of Sri Lankan commercial banks to exchange rate movements of US Dollars, Japanese Yen and Market Rate of Return. All the banking institutions from the selected sample are sensitive to the US Dollar exchange rate movements. As per the results, depreciation of domestic currency value (Sri Lankan Rupee) against US Dollar delineates negative as well as impact on stock returns of the selected banking institutions. Moreover, Japanese Yen exchange rate movement found to be sensitive towards two of the selected banks stock returns. Results indicates that movements in Japanese Yen exchange rate affects stock returns of respective banking institutions either positively or negatively. None of the selected banks stock returns are sensitive to Euro and Great Britain Pounds exchange rate changes. Importantly Market rate of return found to be sensitive towards the stock return generating process of all the selected banking institutions. The important characteristic in this study is that estimation of the exposure coefficients is based on the individual firm level data. This study suggests that further research may be needed in the following areas. The impact of exchange rate movements on the stock returns of commercial banks was done for monthly observations of five years (covering July 2013- July 2018). Future research could extend the period of the study to beyond five years to check whether they confirm the findings of this study. The results of the study were compared to findings in financial and non-financial firms. Further insights may be gained if this study was replicated

using samples of non-financial firms. Furthermore, future research is needed to address the efficiency of the foreign exchange risk management techniques for each individual banking institution and their organization and compare the results obtained with non- financial firms covering the longer time horizons. In addition, future studies need to address the aggregate impact of other macro-economic variables such as interest rate, inflation rate on the stock returns including exchange rate movements.

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The Impact of Free Cash Flow on Profitability of Listed Diversified Holding Companies in the Colombo Stock Exchange

Rajapaksha, R. A. S.¹ and Weerawickrama, V. L.²

The purpose of this study is to identify the effect of free cash flow on the profitability on the Diversified Holding companies listed in the Colombo Stock Exchange. This study will facilitate individual and institutional investors with information to take appropriate decision, as this paper deliver whether the free cash flow actually influence on the profitability or not. The population consisted of nineteen (19) companies listed as Diversified Holdings on the CSE at June 2019. A Purposive sampling method was used to pick a sample of 17 companies listed at CSE (panel data). Secondary data was extracted from audited financial statements and annual reports of the firms, sourced from CSE for a period of five years (2014 –2019). Data analysis was done using a regression model since the nature of the data was quantitative. Free cash flows have significant impact on profitability of the listed diversified holdings companies in Sri Lanka. As per the given results through the analysis, it can be concluded that, free cash flows, firm size and the Lag value of ROCE have a significant impact on the firm profitability.

Keywords: *Diversified Holding companies, Free cash flow, Profitability*

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¹ Department of Accountancy, University of Kelaniya, Sri Lanka (2017_ashen@kln.ac.lk)

² Department of Accountancy, University of Kelaniya, Sri Lanka (2017_viraj@kln.ac.lk)

Introduction

Background of the Study

According for Malik (2011) profitability is one of the most important objectives of financial management. The objective of financial management is to maximize the wealth of the owners and profitability of the company, is a very important determinant of performance. An unprofitable business cannot be survived. It has the ability to reward its owners with a great return on their investment. Therefore, the ultimate goal of the commercial entity must obtain profits to guarantee the sustainability of the prevailing business. Pandey (1980) defined profitability as the capacity of a company, while interpreting. The determinants of profitability should be examined at Understand how companies finance their operations. It will make a financial advantage by having an amount of high level of income. The income obtained from a commercial activity exceeds the expenses, costs and taxes necessary to support the business. Cost effectiveness the analysis classifies the measures and evaluates the company's performance in terms of profits in which it earns in relation to the investment of the shareholders or the capital employed in the company or in relation to sales, profits (or lost). Since most entrepreneurs invest to get a return, you can use the profits earned by a company to measure the success of this investment. Free cash flow is basically used as a measurement tool to determine the amount of money the business is generated after accounting for essential capital expenditures such as buildings or equipment and, similarly, this cash can be used for expansion, dividends, debt reduction or other purposes in both cases Together with, it shows the amount of money that the company allocates after spending maintenance or development and is available to the capital provider used for reinvestment purposes after Compliance with the company's main requirements, such as cash flow as extra or free, is known as free cash flow On the other hand, investors in particular should address the fact that companies can influences free cash flow by extending the time spend to pay bills and keep them their money and shortening the time needed to collect what they are owed. (Christine, 2014).

Recent research Ali, Ormal, & Ahmad (2018) shows that there is a significant positive relationship between free cash flow and profitability. An increase in a company's cash flow leads to a corresponding increase in company profits. This result is achieved through investments. The company should consider important investment decisions to take advantage of additional cash flows. For example, companies that hold surplus cash could use them to buy companies that are too expensive instead of distributing dividends to shareholders. This is possible even if companies have low financial capacity after acquisitions because they are investing in unprofitable investment projects. Companies can choose to keep free cash flows for speculative purposes while waiting for a profitable investment that can promise better returns in the future. The company may also decide to invest in risky assets with higher returns. These investments could then produce better returns that could be profitable for the company. On the other hand, if free cash flows inadequately invested can negatively affect the company's profits if they make risky investments and eventually lose (Carroll & Griffith , 2001).

Through diversification, companies have been able to grow their assets, increase the wealth of their shareholders and expand their portfolios. This objective was achieved through appropriate investment and corporate governance decisions. However, this prevents companies from accessing free cash flow, which leads to increased investment.

Research Problem identification

There is an inexplicable relationship between profitability and free cash flow of companies. More the time when investors find the profitability of the company, a much more important indicator for the financial situation. Force ignoring his cash position (Thangjam , 2015) conflicts of interest between profit and cash flow. Studies have examined the implications of the free cash flow assumption on business investment activity. Lamont (1997) and Berger and Hann (2003) found that the companies that had invested the most had lower free cash flow. Related studies by Harford (1999) concluded that cash-rich firms are more likely to make acquisitions and that these cash-rich acquisitions are followed by abnormal decline in operational performance. Many of studies relating to the topic of impact of free cash flows on firm performance were conducted by the developed countries. The existing knowledge is not sufficient to get a meaningful understanding about the impact of free cash flows on firm performance in Sri Lanka.

The objective of this research was to measure the influence of excess cash flow on the profitability of firms that are listed at the Colombo stock exchange. The findings of this study would be beneficial for foreign and local investors because they would be able to get deep insights on the effect of free cash flow on investment while considering investment decisions and diversification for portfolios to increase profitability. Financial analysts and consultants stand to benefit from the findings of this study; it would enable them to provide improved financial services especially on investment decisions in order to achieve increased profitability.

Research Question

In this study examines the impact of free cash flow on profitability of listed diversified holding companies in the Colombo stock exchange in order to achieve this purpose, this study attempts to address the following research questions.

- what is the impact of free cash flow on profitability of listed diversified holdings companies on the Colombo stock exchange?

Objectives of the study

Objectives of the study are:

- To determine the impact of free cash flow on the profitability of the Diversified Holding companies listed in the Colombo Stock Exchange.

Literature review

Free flow of money (FCF) is defined as (Jensen, 1986) cash flow from operating cash flows loss of capital, loss of inventories and dividends. Free cash flow is a measure of the cash flow generated by an enterprise after the recognition of capital expenditures such as buildings or equipment. This money can be used for expansion, dividends, debt reduction or other purposes. Free cash flow shows the amount of money allocated or budgets allocated by the company after expenditures on maintenance or development of the property. Free cash flow is a free cash flow for the capital provider, which is intended for reinvestment. Once the company's conditions are met, an additional or free cash flow is called free cash flow. Free cash flow (FCF) can also be defined as cash available to the resource provider (equity or debt provider). (Jensen, 1986) Defines free cash flow as a cash surplus over what is required to finance all projects with a positive net present value. Free cash flow is the net income of the

business plus depreciation and all other non-cash expenses less changes in working capital and expenses. Free cash flow is the amount of cash remaining after bill payments, new investments, and ongoing capital improvements. Profits include many non-monetary components such as depreciation of equipment, aromatization of capital expenditures, allowance for bad debts and other accounting entries that may or may not reflect the current economic reality. Revenues can be manipulated while free cash flow is very difficult to manipulate.

Maintaining sufficient amounts of cash within companies is fundamental to the smooth running of businesses. Managers tend to hold a high percentage of the company's assets in the form of cash and cash equivalents in order to reinvest in other physical assets, make payments to shareholders and maintain cash on hand. Inside the company (HANN, et al., 2013). The policy on capital structure, working capital requirements, cash management, dividend payments, investments and asset management is consistent with the cash flow requirements of a company. Defines free cash flow as a cash flow higher than what is needed to finance positive NPV investments. Free cash flow is a sign of agency problems as excess cash cannot be returned to shareholders. When companies have available cash, their acquisitions are, by definition, a negative net present value. Free cash flow can be expressed as: $FCF = EBIT (1 - Tax) + Depreciation \pm \text{Change in CM. Capital expenditures.}$

As a result, it is important to realize that one of the most commonly used instruments of financial metrics the analysis is referred to as the profitability ratio, which clearly counts to determine the final result of the company. Result and return to its investors. Therefore, profitability measures are important for managers and owners and investors of the companies, as they mean the overall efficiency and performance. (Akumu, 2014)

Free Cash Flow Theory

Jensen & Michael (1996) adds that free cash flow is a cash surplus needed to finance all projects with a positive net present value. Free cash flow encourages managers to expand the scope and size of the company, increasing managerial control and personal compensation by investing free resources in projects with net present value equal to negative. These costs are considered unprofitable, particularly for shareholders; it is therefore an aspect of the fundamental conflict of interests between owners and managers that constitutes the theoretical problem of the agency. To mitigate this conflict, the leader should have ownership of the company, which puts him in a position of reluctance to spend the company's money flexibly. With this step, he will recognize and ensure that the company's money (in part) must be handled with care; it will invest these free cash flows in projects with a positive NPV.

(Richardson, 2006) Define free cash flow as an additional cash flow needed to maintain assets and finance new investments.

This is a type of conflict that occurs when entrepreneurs are separated from running a business. Company managers can deviate from the owners' goal of maximizing the value of the company. Instead, leaders can choose to behave in ways that suit their interest. This can be a luxury and car office, expensive trips, extravagant benefits and more. Module (Jensen, 1986).

Pecking Order Theory

The hierarchical order theory popularized by (Myers, 1984) attempts to capture the costs of asymmetric information. It indicates that companies prefer sources of financing (from internal financing to equity) in accordance with the law of least effort or conflict, preferring to raise capital as a means of financing "as a last resort". Therefore, internal funding is used first; when

it is exhausted, the debt is issued; and when issuing more debt makes no sense, shares are issued. This theory argues that companies adhere to the hierarchy of funding sources and prefer internal financing where available and debt is preferred over equity if external financing is required (equity means a share issue, which would mean "transfer of external property" by company). This clearly shows that free internal funds can first be used to finance the company's investment needs.

Modern Portfolio Theory

According to (Findlay, et al., 1979), the Theory of Modern Portfolio will be investigating the investing activities of a country as a whole market and the entire economy perspective. Literally, the principles of this theory can be taken as a substitute for the other approaches, which analysis of the investment's individual merits. The investors are used to analyze individual benefits of each investment, without considering a different kind of performance of other portfolios, relative to each other. In contrary, the Theory of Modern Portfolio enormously indicates the correlation between the investments.

A different kind of portfolio model was developed by Markowitz (1952), to indicate how the risk can be mitigated within an investment portfolio by combining different types of assets. In such cases, the return of those assets should be less than a perfect positive correlation. In contrary, Goslings & Petri (1991) indicated that in case the correlation between two assets is low, thus the risk component between them would be less than the average risk of an individual asset. The size of a portfolio can be reduced by investing the fund in different kinds of asset classes, which represent the risk that varies to each other. According to Reddy (2001), the institutional investors have already following such a method over decades, by diversifying their portfolios basically, their investments are done in between the property and the equity as their fundamental investments.

Empirical Studies

Akumu, 2014 conducted the study on the effect of free cash flow on the profitability of the companies of the Nigeria Stock Exchange, in which a stratified sampling method was used to choose a sample of 30 companies listed on the Nairobi Stock Exchange as of June 2014. The study concluded that there are there was an inverse relationship between free cash flow and the profitability of publicly traded companies in Nairobi Security exchanges.

Thangjam has identified there is a positive correlation between a company's free cash flow and profitability. The degree of relationship between these two variables (free cash flow and profitability) varies from company to company. However, because four companies were selected for the survey, companies that gave positive results Earnings tend to attract shareholders, so employees can get paid on time. Investors receive dividends on time, and companies can meet their obligations. Investigation Emphasis was placed on the importance of free cash flow for business profitability and lack of free Cash is not enough for the organization to survive Thangjam R (2015).

Opondo (2004) compared earnings based on company profits derived from the use of free cash flows. The results show that the results are not significant the difference between cash flow and corporate income especially in capital expenditure distributed. Further studies have not identified net profit or cash flow after tax (CFFO) is close to the market share model described above during this study, Nairobi Stock Exchange (NSE).

Gregory (2005) conducted a cross-sectional survey of UK acquisitions of publicly traded companies with an 8-year trend, 67 companies were selected and a trend analysis was

conducted to establish the performance pattern of listed acquisitions and the flow of Free cash, the results of the study revealed that there was an inverse relationship between the performance of UK acquisitions of listed domestic companies and free cash flow.

Methodology

Based on the literature review, following Conceptual framework was developed. In this study,

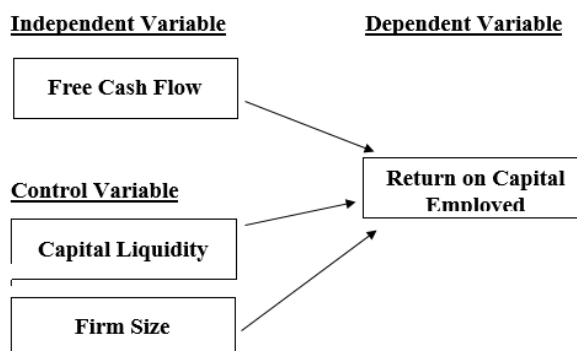


Figure 1 – Conceptual Framework
(Sadaf & Junaid, 2016)

According to (Kamran, et al., 2017), Return on Capital Employed was considered as the most accurate and comprehensive measure of profitability when compared to the Return on Equity. This is because the Return on Capital Employed estimates the management's efficiency of generating returns from a firm's sum total of available resources (capital). Therefore, return on Capital Employed was taken as the measure of profitability. It was calculated using the following equation.

$$\text{Return on Capital Employed} = \text{Earnings before Interest and Tax} / \text{Capital Employed}$$

The data for the Earnings before Interest and Tax and Capital Employed was gathered from the Statement of Comprehensive Income and the Statement of Financial Position. The data for the major independent variable: Free Cash Flow, was gathered according to the following equation (Akumu, 2014).

$$\text{Free Cash Flow} = \text{Profit after Tax} - (\text{Changes in Capital Expenditure} + \text{Depreciation and Amortization} - \text{Changes in Working Capital})$$

The data for the Profit after Tax was obtained from the Statement of Comprehensive Income. The data for the Changes in Capital Expenditure was obtained from the Statement of Financial Position and the Statement of Cash Flow. The data for the Depreciation and the Amortization was gathered through the Statement of Comprehensive Income. The data for the Changes in Working Capital was gathered through the Cash Flow Statement and from the Statement of Financial Position.

Another independent variable of this research study is Capital Liquidity. It was measured by using the following equation (Akumu, 2014).

$$\text{Capital Liquidity} = \text{Liquid assets} / \text{Total Assets}$$

The data for the Liquid assets and the Total Assets was gathered through the Statement of Financial Position. The other independent variable of this study is the Firm Size. It will be calculated by taking the natural logarithm of total assets, which were obtained from the Statement of Financial Position.

Analytical Model

In order to achieve the objective of this research study, the multiple regression model was used to identify the relationship between the free cash flow and profitability.

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Y = Profitability (Measured by the Return on Capital Employed, which derived by dividing the earnings before interest and tax from the capital employed.)

X1 = Free Cash Flow (Measured by deducting the capital expenditure from the operating cash flows.)

X2 = Firm Size (Measured by taking the natural logarithm of the total assets.)

X3 = Capital Liquidity (Measured by dividing the liquid assets from the total assets of the company.)

β = Slope of the regression model which measures the amount of the change in Y associated with a unit change in X.

e = Error term within a confidence level of 5%

Research Hypotheses

- **H1:** There is a significant impact of free cash flow on profitability
- **H2:** There is a significant impact of Firm Size and profitability
- **H3:** There is a significant impact of Capital Liquidity and profitability

Population, Sample & Data collection

The population of the research study is the Diversified Holding Companies listed in Colombo Stock Exchange (CSE) in Sri Lanka during the 2014-2019 period. The reason for selecting diversified holding companies is those are the companies which are most like to do investment comparing to other companies in Sri Lanka.

Purposive sampling method using as the sampling method which is coming under non probability sampling. The sample includes 17 Diversified Holding Companies listed in the Colombo Stock Exchange. (Because some companies' relevant details are not in public)

Purposive sample there are different ways of sampling, and non-probability methods can be just as good as probability method (Tongco, 2007).

The secondary data were used for the study, which was extracted from the audited annual reports and the financial statements of Diversified Holding Companies listed in Colombo Stock Exchange, for the period of seven years (2014-2019).

The annual financial statement included: the statement of comprehensive income. The statement of financial position, the statement of changes in equity and the statement of cash flow. Further information was gathered through the website of Colombo Stock Exchange.

Data presentation and analysis

Table 1: Descriptive Statistics

	Return On Capital Employed	Size	Free Cash Flow	Capital Liquidity
Mean	0.0614	17424463.38	-72854.1190	0.4013
Median	0.0813	9096485.737	296379	0.2637
Maximum	0.6554	133626116	117049725.601	11.7511
Minimum	-3.4002	201127	-168818286.249	0.0102
Std. Dev.	0.3743	25269569.7	30932135.63	1.1577
N	102	102	102	102

Source: Research Findings.

The mean is the sum of the observations divided by the total number of observations. The median is the middle value of the total observation. The standard deviation is the squared root of the variance; it shows how close the data is to the mean. The variance measures the dispersion of the data from the mean. It is the simple mean of the squared distance from the mean. Count (N in the table) denotes to the amount of observations per variable. The range is also an additional measure of dispersion. It is the difference between the largest and smallest values, maximum minus minimum. Minimum is the lowest value in the variable. Maximum is the largest value in the variable.

In table 1.1 statistical analysis of profitability is shown in the table above. The maximum score of profitability (return on capital employed) is 0.65546 and the minimum score for profitability (return on capital employed) is -3.40024 and the mean for profitability (return on capital employed) for the diversified listed firms is 0.0614380 The Free cash flows has a maximum score of 117049725.601 while its minimum value is --168818286.249 as shown above. Similarly, the mean for free cash flows for the listed firms' is -72854.1190 with a standard deviation of 30932135.63. With respect to the capital liquidity, the maximum score was found to be 11.75113 while its minimum score is 0.01028634. The results show that the mean for the industry is 0.401374 with a standard deviation of 1.157765 In relation to the size of the firm, its maximum score as shown in the table above is 133626116 and the minimum score is 201127. Standard deviation and average value are respectively 25269569.7 and 17424463.38.

Table 2: Correlation Analysis

	ROCE	Size	Free Cash Flow	Dcapital Liquidity
ROCE	1			
SIZE	0.4253	1		
FREE CASH FLOW	0.0856	0.0780	1	
CAPITAL_LIQUIDITY	0.1700	-0.1726	0.0209	1

Source: Research Findings.

The correlation coefficient shows the strength and direction of the variables. The partial correlation coefficient shows the correlation between two variables holding the other constants. Table 1.2 shows the Pearson correlation coefficient of our sympathetic variables.

From the above finding table 1.2 is shown correlation coefficients of sample companies 17 companies of diversified listed companies in Colombo Stock Exchange year observation for period 2015-2019. The correlation value between 0.0-0.3 indicate that there is no correlation, 0.31-0.5 show weak correlation, 0.51-0.7 a moderate correlation, 0.71-1 shown that there is a strong correlation between the variable. In table 4.2 above shows that, there is a weak positive correlation between return on capital employed and company size diversified listed companies in Colombo Stock Exchange. There is no correlation between return on capital employed and free cash flow as well as return on capital employed and capital liquidity.

Table 1.3 Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SIZE	0.015711	0.003978	3.949817	0.0002
FREE CASH FLOW	1.31E-11	1.87E-10	0.069967	0.0445
D(CAPITAL_LIQUIDITY,1)	0.005232	0.003132	1.670668	0.0987
RETURN ON CAPITAL EMPLOYEED(-1)	0.445703	0.080959	5.505271	0.0000
C	-0.210708	0.061790	-3.410050	0.0010
R-squared	0.411473	Mean dependent var		0.075183
Adjusted R-squared	0.382046	S-.D. dependent var		0.070968
S.E. of regression	0.055788	Sum squared resid		0.248987
F-statistic	13.98312	Durbin-Watson stat		2.116145
Prob(F-statistic)	0.000000			

Source: Research Findings.

The researcher conducted a multiple regression analysis so as to determine effect of the free cash flow and profitability of diversified listed company in Colombo Stock Exchange. And three variable investigated to estimate the following equation.

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + e$$

$$ROCE = -0.210708 + 0.015 X_1 + 0.0000000000131X_2 + 0.005 X_3 + 0.445 X_4$$

The coefficient of determination explains the extent to which change in dependent variable (Return on Capita Employment) can be explained by the change in the independent variable (Firm Size, Free Cash Flow, Capital Liquidity, and lag value of Return of capital Employment).

Four independent variables that ware studied, explain 38% of changes in the profitability (return on capital employed) of diversified firms at the Colombo stock exchange a represented at the adjusted R². Multiple correlation coefficients is represented by the R column which is measure quality of prediction of dependent variable. Here value of R is 41%. Firm Size, Free Cash Flow, Capital Liquidity, and lag value of Return of capital Employment could be able to explain the dependent variable, other 59% can be explained by other variables which were not in the model.

The probability value of 0.0000 implies that the regression model was significant in predicting the relationship between the independent variables and the dependent variable. The significance between the variables less than $\alpha=0.05$. By use of the F-table, (F value = 0.0000, P value = 0.000 < 0.05) meaning that there is a significant effect of the Firm Size, Free Cash Flow, Capital Liquidity, and lag value of Return of capital Employment on Return on Capital Employment of diversified listed companies in Colombo stock exchange. This result indicates that the overall regression model is statistically significant and is useful for prediction purposes at 5% significance level.

The Durbin-Watson statistic test make sure that whether there is an autocorrelation in the residual from a statistical regression analysis. The Durbin-Watson statistical result always have a 0 to 4 value. If this value from 0 to 2, there is a positive autocorrelation and value from 2 to 4 is negative relationship. Before consider the ROCE (-1) as the independent variable Durbin-Watson value were near to 1. It means that there is an autocorrelation in the residual at first level. RCOE (-1) included as independent variable. Then Durbin-Watson value is 2.116.

The mean net return on capital employed intercept of -0.210708 indicates that for every increase on the variable constant then return on capital employed is -0.210708. Coefficient of size is 0.0157 it means that if log variable of size change in 1% ROC positively change by 0.0157. The regression coefficient represents the amount of change in the dependent variable for a one unit change in the independent variable.

If free cash flow will Change by one billion return on capital employed will change by 0.0131 cents. The regression model results it pointing out positive impact on profitability. The t statistics were used to test the hypothesis that there is an effect of free cash flow on profitability of diversified listed company in Colombo stock exchange.

P value < 0.05 then null hypothesis is rejected, here p vale of t statistics of free cash flow is less than 0.05 therefore alternative hypothesis is accepted and free cash flow defection is significant at 95% confidence level.

If Capital liquidity will change by one unit, return on capital employed will change by 0.0052 unit its p value of the t statistics of Capital Liquidity is 0.0987 and it is more than 0.05 therefore Capital liquidity is not significant. Lag value of Return on capital employed (ROCE) is significant at 5% confidence level because its p value of t-statistics is 0.0000 < 0.005. Coefficient of return on capital employed (-1) is 0.445 its means that if return on capital employed (-1) will change in one unit return on capital employed will Change 0.455 unit.

Conclusions and recommendation

This empirical study is analysed the significant effect of free cash flow on profitability of the listed diversified holdings companies in Sri Lanka.

In the model, as per the given results through the analysis, it can be concluded that, firm size and the Lag value of ROCE have a significant impact on the firm profitability. Free cash flow and capital liquidity has no significant impact on the profitability of the listed diversified holdings companies in Sri Lanka.

Key Features	P-value	Decision
Firm Size	.0002	There is a significant positive relationship between firm size and profitability in an organization.

Free Cash Flows	.0445	There is a significant positive relationship between free cash flows and profitability in an organization.
Capital Liquidity	.0987	There is an insignificant positive relationship between capital liquidity and profitability in an organization.
Return on Capital Employed (t-1)	.000	There is a significant positive relationship between past year return on capital employed and profitability in an organization.

This research study examined the significant impact of the free cash flow on profitability of the listed diversified holdings companies in Sri Lanka. Here out comes are represented that there is no significant effect of free cash flow on profitability, therefore the study recommend company shareholders and management should have concern about the extra free cash flow and reinvestment diction.

The study also recommends that, with a strong cash flow, a company can borrow money to buy buildings, equipment and inventory one essentially uses future cash flow to make purchases. Inherently, you need a positive future cash flow to pay off your debt

Commitments for companies that have long-term loans and short-term credit accounts with suppliers. Each loan requires monthly payments. The obligation to make these payments continuously limits free cash flow, which is money available to invest in growing assets.

The study recommends that listed companies should invest in gainful projects in order to hold excess cash flows which is a measure of a firm's ability to make cash, which is a fundamental basis for stock pricing. This is why some people value free cash flow more than just about any other financial measure out there, including earnings per share.

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The Factors Influencing Financial Behavior of Government Teachers in Sri Lanka

Premarathne, W. G. I. D.¹

Existing in a world which is more financially driven rather than more trade driven, the quality of life depends upon the individual's capacity to manage his/her financial affairs. This study focuses on analyzing the factors that influence the financial behaviour of government teachers in Sri Lanka. The study has been motivated to investigate the financial behaviour among teachers due to the fact that teachers being role model figures can make an impact on the younger generation's financial knowledge and skills in personal financial management. Similarly, teachers can be used as a benchmark community sector to address this timely and debatable topic of financial behaviour and lack of financial knowledge even in an educated community. This study used the quantitative approach through distributing questionnaires to collect data and the Multistage Random Sampling technique was exercised in selecting the sample of 117 respondents. The data was analyzed by using the multiple regression analysis. The results of the study were evident enough to prove that financial literacy, financial self-efficacy and social economic status had a positive and a significant impact on financial behavior. Social economic status showed the highest impact on the financial behaviour of teachers. The findings show that all the independent variables in this study have a significant effect on financial behaviour. As a consequence, the study findings make a guidance to future researchers to develop other variables that are related to teachers' financial behaviour. Thus, this study contributes both to the practice and knowledge domain.

Keywords: *Financial Behaviour, Financial Literacy, Financial Self Efficacy, Social Economic Status*

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¹ Department of Finance, University of Kelaniya, Sri Lanka. (*imeshadevindi99@gmail.com*)

Introduction

Over the past decade, the issue of the financial behaviour of the community has become an imperative priority on the agendas of educators, community groups, government agencies, private organizations, and policy makers. This has increased the interest in financial education as a primary factor based on the argument that well informed, financially educated consumers are better able to make sound financial decisions in their day to day lives increasing their financial security and comfort. And financially secured families also possess a higher capability to contribute to vibrant, flourishing communities thus nurturing the economic development of a community (Braunstein & Carolyn, 2002; Hilgert, Hogarth & Beverly, 2003; Hogarth, Beverly, & Hilgert, 2003). However, the increased volume of consumer debt, low volume of personal saving rates, and growths in personal bankruptcy rates have produced concern about the consumers' preparation for today's financial marketplace where favourable financial behaviour alone is inadequate (Lyons, Chang & Scherpf, 2005 as cited in, Surendar & Sarma, 2018).

'Financial behaviour' simply refers to one's practice of using an organised financial management system, for example a consistent savings plan through well thought and written plan with specific aims (Titus, Fanslow, & Hira, 1989). Further, good financial behaviour can also be described as the composition of an effective behaviour such as preparation of financial record, proper documentation on the cash flow, planning expenses, paying utility bills, controlling the usage of credit card as well as a savings plan (Gorham, DeVaney, & Bechman, 1998).

As per the literature, financial literacy and self-efficacy play a vital role in affecting how his or her financial behaviour is. 'Self-efficacy' can be identified as an individual's belief about his or her ability to organize and to do a series of actions deemed necessary to reach something desired. Focusing on its relation to one's financial behaviour, self-efficacy is related to financial self-efficacy which can be defined as a belief in one's ability to change financial behaviour towards a better direction (Danes & Haberman, 2007).

Similarly, financial behaviour may be influenced by an individual's financial literacy which can be interpreted as financial knowledge with the purpose of acquiring capital. A financial literate individual will influence his or her financial behaviour towards a positive direction such as; the payment of a bill on time, having savings and investment, and ability to manage credit cards wisely (Lusardi, Mitchel & Curto, 2010).

In addition, to financial literacy and financial self-efficacy, one's social economic status also plays a vital role in determining the financial behaviour. The results of previous studies disclose that financial knowledge, financial attitude, and financial behavior differ from one student to another with high, medium, or low social economic status (Gutter, Zeynep, & Selena, 2015). It means that people with high social economic status will also have a high level of knowledge, attitude, and behavior and vice versa.

A number of researches have been carried out in various countries focusing on the discipline of financial behaviour (Zaimah et. al., 2013; Danes & Haberman, 2007; Lusardi, Mitchel & Curto, 2010). But creating an empirical gap only a few studies have been done in Sri Lanka on financial behaviour. However, there is a dearth of studies done on financial behaviour among teachers in Sri Lanka using a quantitative approach which emphasizes a methodical gap.

This study attempts to fill these gaps by addressing the following research questions.

- What is the effect of financial literacy on financial behaviour of teachers in Sri Lanka?
- What is the effect of financial self-efficacy on the financial behaviour of teachers in Sri Lanka?
- What is the effect of the social economic status on the financial behaviour of teachers in Sri Lanka?

The need to investigate financial behaviour among teachers is important since teachers are among the role model figures who can influence the younger generation's financial knowledge and skills in personal financial management. The results of the research can be used by teachers, school administrators and policymakers to identify the factors influencing good financial behaviour. Thus contributing to both the knowledge and practice.

In an attempt to accomplish the above, this paper is divided into the following sections. Firstly, the literature on financial behaviour and the key determinants have been reviewed, followed by an explanation of the methodology that has been employed. Then the factors influencing the financial behaviour of teachers have been critically analyzed after which the conclusions and the implications have been presented.

Literature review

Financial behavior has evolved into a personal financial management tool which can be described as a learning process in planning, taking action in accordance with the planning, and make improvements to the implementation of planning that needs to be addressed in individuals. In the Sri Lankan context, a study of financial behaviour reveals how people are lagging behind the basic financial management. According to the findings of Standard and Poor's Ratings Services Global Financial Literacy Survey 2014, reports only 35% of Sri Lankan adults are financially literate. Further, the report done by by Kelegama and Tilakaratna (2004) with the guidance from Asian Development Bank Institute reveals that there is a lack of financial literacy programmes provided in Sri Lanka comparative to the other countries.

In most of the previous studies, (Albeerdy & Behrooz, 2015; Vyviyan, Blue, & Brimble, 2014; Lusardi, Mitchell, & Curto, 2010) financial literacy has been revealed as one of the key factors affecting financial behaviour. The term comprises of financial education or knowledge, financial awareness including products, institutions, and concepts; financial skills, such as the ability in computing interest payments, and financial capabilities such as money management and financial planning. However, in practice, these notions frequently overlap with each other (Abubakar, 2015).

Financial literacy has a significant effect on financial behaviour. A person with low financial literacy usually undergoes financial problems such as, having loose debt that cannot be repaid, having no social security and no adequate pension program. Thus, financial literacy is crucial in determining the financial behaviour for today and the future. This is in line with Susanti (2013) that financial literacy has a significant effect on students' financial behaviour.

Several studies disclosed that financial literacy is positively related to financial behaviour. The study done by, Hilgert, Hogarth, and Beverly (2003) added financial behaviour and financial literacy questions to the nationwide Survey of Consumer Finances. And the Financial Practices Index was formed based upon the behavior in four variables: cash-flow management, credit management, savings and investment practices. And comparing the results of this index with scores on the financial literacy quiz, Hilgert, Hogarth, and Beverly (2003) found that higher Financial Practices Index scores were obtained by those who were more financially literate, proving that financial knowledge is related to financial behavior.

Further, in a study of Dutch adults, Rooij, Lusardi, and Alessie (2007) revealed that individuals with low financial literacy were more prospective than others to base their behavior on financial advice from third parties like friends and were less likely to invest in stocks.

Today financial education is not the only element that can change individual financial behavior towards a better direction. A major factor influencing consumer behavior is the feeling of self-efficacy which is having the confidence in one's ability to deal with a situation without being overwhelmed (Lown & Jean, 2011). In this study self-efficacy was related to the teachers' financial self-efficacy, i.e., belief in self-ability to change financial behavior to a better direction. This indicates the self-confidence about financial ability that one owns and influences on how one behaves.

Self-efficacy influences ones' attitude and behavior in reaching their goal, high commitment, and good performance, which also can be applied in financial behavior. The results of previous studies show that the self-confidence attitude in managing finance got a higher score than self confidence in making appropriate financial decision (Danes & Haberman, 2007). This indicates that one's self-efficacy has more influence on one's financial behavior in the future. Thus, financial self-efficacy helps teachers to act and change financial behavior towards a better direction. According to the study, Keneedy & Brian (2013) analyzed the effect of the theory of planned behavior (TTB) on behavior in credit card loans. The study referred to self-efficacy, i.e., an individual's belief in his or her ability to perform a task at a certain level in his or her performance. The result showed that financial self-efficacy has a negative impact on the students' behavior towards credit cards. This indicates that students with a higher financial efficacy will be reduced to unhealthy or irrational behavior. Thus, in this case, it can be concluded that financial self-efficacy has an effect on financial behavior. The higher a person's financial self-efficacy is, the better the individual's financial behaviour.

The formation of a good financial behaviour in teachers needs a special attention since their financial behavior influences the financial behaviour of school children due to the teachers being a role model. And teachers are the most influencing social sector for students' future behaviour. The results of previous studies show that the social economy factor has a significant impact on financial attitude. Someone's social economic and demographic conditions have an influence on his or her attitude as part of a psychological variable construct (Widayati, 2011).

The results of the prior studies show that an individual's income has a significant effect on financial behaviour shown with the ownership of credit management, savings and investments and planning the pension financial schemes (Scheresberg & Carlo, 2013). This study specifies that one's social economic status can have a positive effect on his/her financial behaviour development. A study by Fonseca, Mullen, Zamarro & and Zissimopoulos (2010) focusing on the role of marriage and division of financial decision-making among couples and how it correlates with the levels of financial literacy and educational level of each partner, reveals that, there was a financial literacy gap between males and females with females being more financially illiterate; however, improvement in education, income, and marital status reduced the gap by almost 25%. They also found that financial decision-making within couples was sensitive to the relative educational level of spouses for both males and females.

Similarly, Mottola (2012) found that females were more likely to engage in costly credit card behaviors than males. In another study, Chen and Volpe (2002) measured gender differences in personal financial literacy among college students and stated that on average females were less financially literate than males even after controlling the impact of other factors.

Methodology

This study employed the quantitative approach in order to investigate the theories through the measurement of research variables and computing data analysis by following statistical procedures. Figure 1 depicts the conceptual framework of the study to show how the variables of financial self-efficacy, and social-economic status influence the teachers' financial behavior in Sri Lanka.

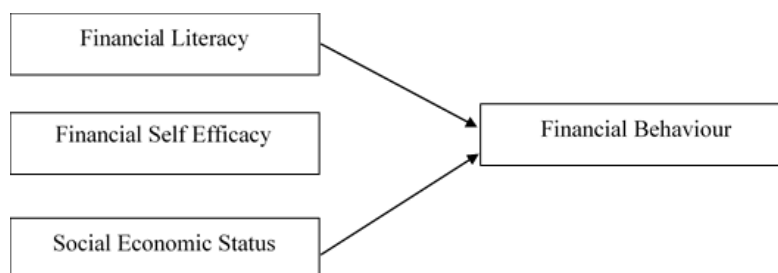


Figure 1: Research Framework

Source: Researcher Constructed

The operationalization of these variables is shown in the Table 1 below.

Table 1: Operationalization of Variables

Concept	Measuring Indicator	Measurement	Source
Dependent Variables – Financial Behaviour			
Financial Behaviour	Five Point Likert Scale	Questionnaire (1-11)	Herawati et. al., 2018
Independent Variables			
Financial Literacy	Five Point Likert Scale	Questionnaire (12-18)	Herawati et. al., 2018
Social Economic Status	Five Point Likert Scale	Questionnaire (1-5)	Herawati et. al., 2018
Financial Self efficacy	Five Point Likert Scale	Questionnaire (19-24)	Farrel, Tim and Rissie, ,2015

Source: Researcher Constructed

The population in this study was all the teachers working in government schools in Sri Lanka. The population was selected based on the reflection of teacher as one of the main role models in one's life who can influence and inspire the future generation.

The multi stage random sampling method was employed in this study which belongs to the probability sampling. It allows the population of the study to have an equal chance to be nominated as 'sample'. Thus, using this sample technique the researcher exercised a step by step sample selection from a larger population to represent with exact features to the sample. Thus, this technique concluded as the best approach which deals with the researcher's objective to get it done with a representative sample (Dantes, 2012). The study used a sample of 117 respondents representing 07 provinces in Sri Lanka; Central, Eastern, Sothern, Western, North Western, Uva and Sabaragamuwa provinces to collect data through the

distribution of a questionnaire. And due to the information collection barriers such as time limitation, external limitation factors and language related issues the researcher had to drop the other two provinces.

Based on the literature, the hypotheses build up for this study are;

- H01: There is a significant relationship between financial behaviour and financial literacy
- H02: There is a significant relationship between financial behaviour and financial self-efficacy
- H03: There is a significant relationship between financial behaviour and socio economic status

The data collected through the questionnaire were analyzed using the demographic factor analysis, correlation and multiple regression analysis. The multiple regression analysis was used to find the effect of financial literacy, financial self-efficacy, and social economic status on the financial behaviour of the teachers. Before hypotheses testing, assumptions; normality, linearity, Heteroskedasticity and multicollinearity were tested.

Findings and Discussion

Requirements Analysis

The Normality testing results through Shapiro–Wilk test was at 1.407 and significant at 0.074 > 0.05. Thus, it can be concluded that the data in this study had a normal distribution. Then, ANOVA table output was used in testing linearity. Based on the outcome figures F-Linearity value was depicted at $\text{sig} < 0.05$ for all the independent variables emphasizing the fact that the regression equation in this study is linear. Additional to the correlation matrix of independent variables, the multicollinearity was tested using the Variance Inflation Factor (VIF) value ≥ 10 and the tolerance value ≥ 0.1 . The testings' results of these, evidenced that there was no multicollinearity between the independent variables in the regression model used in the study. Then Glejser test was carried out in testing Heteroskedasticity. Based on Glejser test, all the variables have a level of significance value ≥ 0.05 . Thus, it can be concluded that the regression model is Homoscedastic. Further, the study did a reliability test at the inception and the results were as follows.

Table 2: Reliability Coefficients

Scale	Cronbach's Alpha	Number of items
Financial Behaviour	0.713	11
Financial literacy	0.704	07
Financial self-efficacy	0.761	06
Socio economic status	0.862	05

Source: Survey Data (2020)

The above values state an acceptable reliability result which is greater than 0.7 and it shows the better reliability.

Demographic Profile of Respondents

Table 3: Demographic Profile of the respondents

Gender	Male	34%
	Female	66%
Marital Status	Married	58%
	Unmarried	42%
	Other	0%
Age Group	25 – 30 Years	48%
	30 – 35 Years	14%
	35 – 40 Years	20%
	40 – 45 Years	10%
	45 – 50 Years	8%
	Above 50 years	0%
Highest Educational Qualification	Teaching Diploma	57%
	Degree	41%
	Masters	2%
	Other	0%
Average Monthly Income Level	Below Rs: 50,000	48%
	Rs: 50,000 – Rs: 70,000	30%
	Rs: 70,000 - Rs: 90,000	14%
	Rs: 90,000 - Rs: 100,000	5%
	Above Rs: 100,000	3%

Source: Survey Data (2020)

Correlation

The correlation among this study variable was tested using Spearman's rho and the test results can be observed as shown in Table 04.

Table 4: Correlation

Correlations						
			Socio Economic Status	Financial Behaviour	Financial Self efficacy	Financial Literacy
Spearman's rho	Socio Economic Status	Correlation Coefficient	1.000	.866**	.484**	-.248
		Sig. (2-tailed)	.	.000	.000	.082
		N	100	100	100	100

	Financial Behaviour	Correlation Coefficient	.866**	1.000	.789**	.705
		Sig. (2-tailed)	.000	.	.000	.467
		N	100	100	100	100
	Financial Self efficacy	Correlation Coefficient	.484**	.789**	1.000	-.047
		Sig. (2-tailed)	.000	.000	.	.744
		N	100	100	100	100
	Financial Literacy	Correlation Coefficient	-.248	.705	-.047	1.000
		Sig. (2-tailed)	.082	.467	.744	.
		N	100	100	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Survey Data (2020)

Hypotheses Testing

In order to analyze the effect of financial literacy, financial self-efficacy, and social economic status on the teachers' financial behavior, the study employed multiple regression analysis and the test results can be observed in Table 5, Table 6 and Table 7 respectively.

Table 05: Results of an analysis by ANOVA

ANOVA^a

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.311	3	1.770	48.798	0.000 ^b
	Residual	4.100	113	0.036		
	Total	9.411	116			

a. Dependent Variable: Financial Behaviour

b. Predictors: (Constant), Financial Literacy, Social Economic Status, Financial Self Efficacy

Source: E- views Outcome

When analyzing the ANOVA part in Table 5 above, it depicts that the probability of the model (F Statistic) is $0.000 < \alpha = 0.05$ which indicates that the overall model is significant under 1% significant level in determining the financial behaviour of government teachers in Sri Lanka. Further, at the same time the independent variables of the study; financial literacy, financial self-efficacy, and social economic status show a significant effect on the dependent variable: financial behavior. Thus, to continue the analysis the individual test or t-test was exercised based on the results.

Table 06: Model Summary**Model Summary^b**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.751 ^a	0.564	0.553	0.19047

a. Predictors: (Constant), Financial Literacy, Social Economic Status, Financial Self Efficacy

b. Dependent Variable: Financial Behaviour

Source: E- views Outcome

Based on the model summary, Table 6 above, it is displayed that the multitude of the determinant coefficient or the contribution of the financial literacy variable (X_1), financial self-efficacy (X_2), and social economic status (X_3) on financial behavior (Y) is (R_{square}) = 56.4, which means that 56.4% of the dependent variable, financial behavior (Y) can be explained by financial literacy (X_1), financial self-efficacy (X_2) and social economic status (X_3). The multitude of the residue coefficient ($1 - 56.4$) = 43.6 was explained by other variables outside the model. And the correlation coefficient (R value) of 0.751 indicates that the selected independent variables have a strong positive relationship with the dependent variable, financial behaviour.

Then, to see the multitude effect of financial literacy (X_1), financial self-efficacy (X_2), and social economic status (X_3) on financial behavior (Y) partially, t-test was used, while to see the magnitude of the effect, Beta or Standardized Coefficient figures were used as shown in Table 7 below.

Table 07: Coefficients**Coefficients^a**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	4.679	0.230		20.371	0.000
Social Economic Status	0.304	0.031	0.666	9.818	0.000
Financial Self Efficacy	0.096	0.046	0.146	02.102	0.038
Financial Literacy	0.084	0.037	0.147	2.288	0.024

a. Dependent Variable: Financial Behaviour

Source: E- views Outcome

Based on the results of testing in Table 7, then the regression equation of the effect of the independent variables (financial literacy, financial self-efficacy, and social economic status) on the dependent variable (financial behavior) can be formulated as follows.

Financial Behaviour (Y) = 4.679 + 0.304 Social Economic Status + 0.096 Financial Self Efficacy + 0.084 Financial Literacy

The constant value of 4.679 indicates that if all the independent variables are assumed to be constant, then the mean of the teachers' financial behavior level is 4.679. Moreover, the regression equation above shows the effect of each independent variable on the dependent variable seen from Beta value in unstandardized coefficients.

Based on the Coefficients in Table 7, it can be observed that financial literacy has a positive and a significant effect on the teachers' financial behaviour. This can be seen from the value of $\text{sig.} = 0.024 < 0.05$; $t = 2.288$; $\beta = 0.084$, that indicates if financial literacy improves by 1 point, then the teachers' financial behavior will also increase by 0.084 points. The improvement of financial literacy is the way to improve empowerment and life quality. Thus, when the teachers get more knowledge about the finance management, they will be able to make better financial decisions. This can be observed through examining their ability to manage their personal finance, to manage investments through making better options and more regularly and have adequate insurance. This finding is in line with some other previous studies (Chen & Volpe (1998); Vyviya et.al. (2014); Robb & Woodyard (2011); Gutter (2008) and Susanti (2013)) who state that financial literacy has a significant effect on an individual's financial behaviour.

Then, from the Coefficient Table 07 above it can be concluded that financial self-efficacy also has a significant positive impact on the teachers' financial behaviour in Sri Lanka. This can be seen from the value of $\text{sig.} = 0.038 < 0.05$; $t = 2.102$; $\beta = 0.096$, which indicates that if financial self-efficacy increases by 1 point, then the teachers' financial behavior in Sri Lanka will also increase by 0.096 points. This finding is also in line with the previous studies which show that attitude (self-confidence/belief) in financial management has a higher mean score than self confidence in making appropriate financial decisions. This stands to make indicative that an individual's self-efficacy influences their financial behavior in the future. Thus, self-efficacy will help teachers to act and make a change in financial behavior towards a better direction. Other studies show that self-efficacy has an effect on peoples' credit card and loan behavior. This indicates that the teachers with a high self-efficacy will lead to decrease their ridiculous debt seeking behavior (Danes & Haberman, 2007; Kennedy & Brian, 2013). This study results show that self-efficacy can be used as a predictor in analyzing debt behavior (financial behavior) in the teachers. Thus, in this case it can be concluded that self-efficacy has a significant effect on financial behaviour.

The results of the study also indicate that there is a positive and a significant effect on the social economic status on the teachers' financial behavior. From the Coefficients Table 7 the value of $\text{sig.} = 0.000 < 0.05$; $t = 9.818$; $\beta = 0.304$, can be observed indicating that if parents' social economic status goes up by 1 point, the students' financial behavior will go up by 0.304 points. This study is in line with some other studies done by Gutter, (2009) and Bassa, (2013) that state that the individual income has a significant effect on financial behavior shown by the possession of loan management, saving, and investing and making a financial plan for the future or a pension financial scheme.

Further, this study also states that a change towards a positive direction which means, the higher the social economic status of the teachers the better their own financial behavior becomes. Additionally, the teachers who live in stable families, have a high education, and financial sufficiency are anticipated to have a better financial behavior. Previous studies indicate that rationality, morality, and life style have a correlation with effectiveness and productive activity. This study also acts in line with that as follows: the higher the teachers' social economic status, their rationality and financial morality will become better. They have better incomes, get a better financial education, and interact with a better social environment.

Thus, it can be concluded that social economic status has a positive and significant effect on the teachers' financial behavior.

Conclusion and Recommendations

The study analyzed the factors affecting the financial behavior of teachers in Sri Lanka with three key factors; financial literacy, financial self-efficacy and socio economic status identified from previous literature. The study aims of identifying the financial behavior among teachers in government sector was motivated as they, well represent the middle economic community with a middle level of educational background. As well, they are the major sector who can influence the young generation of Sri Lanka through being a role model to the students and through teaching and inculcating good financial behaviour patterns. In addition, financial behavior is important because it influences the level of financial well-being of an individual.

On the basis of the results and discussion above it can be concluded that financial literacy, financial self-efficacy, and social economic status have direct effect on the teachers' financial behavior in Sri Lanka. The social economic status variable has a very strong effect on the teachers' financial behavior. This shows that 'family' is the closest socialization agent able to form an individual's behavior. The results of this study prove that the higher the teachers' social economic status with higher education, higher income, the better their financial behavior is. In addition, financial self-efficacy, also has an effect on the teachers' financial behavior. Today, it is not only financial education that can change an individual's financial behavior towards a better direction. The other major factor that has not been addressed by many of the researchers as an influencing factor for consumer behavior, is the feeling of self-efficacy which is having the confidence in one's ability to deal with a situation without being astounded.

With reference to all the factors revealed from this study, one can conclude that although teachers represent a well-educated sector in society they also lack and are lagging behind the financial literacy and possess a weak financial behaviour. Thus, this will consequently make bad effects to the younger generation who have made 'teachers' as their role model. Thus, the researcher suggests to the teachers and administration of schools and practitioners to develop an effective strategy to improve the financial literary level of teachers to make a society with good financial behaviour.

Further, the study is proposed to identify the other factors (Financial Attitudes, Budgeting and Tax Planning, Managing Liquidity, Planning Retirement and Estate Investing Savings) that influence the financial behavior among teachers in order to come out with effective strategies in improving their financial behavior. It is important to identify the financial behavior because it affects the financial well-being which could also influence work productivity of an individual.

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QUESTIONNAIRE

Please provide your response to the following questions placing (X) mark in front of your answer.

SECTION A:

01. SOCIO ECONOMIC STATUS

1. Gender
 - Male ()
 - Female ()
2. Marital Status
 - Married ()
 - Unmarried ()
 - Other ()
3. Age Group
 - 25 – 30 Years ()
 - 30 – 35 Years ()
 - 35 – 40 Years ()
 - 40 – 45 Years ()
 - 45 – 50 Years ()
 - Above 50 years ()
4. Highest Educational Qualification
 - Diploma ()
 - Degree ()
 - Masters ()
 - Other ()
5. Average Monthly Income Level
 - Below Rs: 50,000 ()
 - Rs: 50,000 – Rs: 70,000 ()
 - Rs: 70,000 - Rs: 90,000 ()
 - Rs: 90,000 - Rs: 100,000 ()
 - Above Rs: 100,000 ()

SECTION B:

The respondents are requested to rank their level of agreement on the statements presented under each dimension of financial behaviour in day to day life.

Please put (X) under the number that best indicates the degree to which you agree or disagree with each of the following statements.

- 5 Strongly Agree 4 - Agree 3- Neutral 2- Disagree 1- Strongly Disagree

Financial Behaviour

	1	2	3	4	5
1. I do a monthly personal budget.					
2. I review and assess expenditures every end of the month.					
3. I plan my budget to achieve my financial objective					
4. I pay utility bills on time.					
5. I pay all loan installments on time.					
6. I set aside money for saving.					
7. I set aside money for emergency.					
8. I save money specifically for pension.					
9. I use a credit card when I run out of money.					
10. I withdraw cash from credit card for my expenses					
11. I have reached the maximum limit on my credit card usage					

Financial Literacy

	1	2	3	4	5
12. I have a better understanding on how to invest my money					
13. I have a better understanding of how to manage my credit use					
14. I have a very clear idea of my financial needs during the retirement.					
15. I have the ability to maintain financial records for my income and expenditure					
16. I have little no difficulty in managing my money					
17. I have better understanding of financial instruments (Ex: Bonds, stocks, T- bills, Future contracts, Options etc.)					
18. I have ability to prepare my own monthly budget					

Financial Self efficacy

	1	2	3	4	5
19. It is hard to stick to my spending plan when unexpected expenses arise.					
20. It is challenging to make progress toward my financial goals					
21. When unexpected expenses occur I usually have to use credit					
22. When faced with a financial challenge, I have a hard time figuring out a solution.					
23. I lack confidence in my ability to manage my finances.					
24. I worry about running out of money in retirement.					

Thank You for the Valuable Response!!!

Impact of Audit Committee characteristics on Financial Performance of companies listed under materials sector in CSE

Kasthury, S.¹ and Anandasayanan, S.²

Audit committee functions as an indispensable mechanism by effectively communicating between internal and external auditors. This study aims to evaluate how the audit committee affects the entities' financial performance using a sample of companies from the material industry, out of 20 GICS industries listed in CSE. Only 14 companies were chosen out of the 23 companies in the material sector using the random sampling method. This study was based on secondary data where the data was obtained for these 14 companies from annual reports for the period from 2012 to 2019. The statistical techniques of Descriptive Statistics and Regression Analysis were utilized for analyzing the data. Earnings Per Share as a dependent variable and the audit committee size, audit committee independence, audit committee financial expertise, audit committee meetings were considered as independent variables, furthermore firm size as control variables were utilized for undertaking the study. The findings revealed that the audit committee meetings had a significantly positive impact on earnings per share, whereas all the audit committee attributes excluding audit committee independence showed a positive influence over earnings per share.

Keywords: *Audit Committee Financial Expertise, Audit Committee Independence, Audit Committee Meetings, Audit Committee Size, Earnings per Share*

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¹ Department of Financial Management, University of Jaffna (skasthu23@gmail.com)

² Department of Financial Management, University of Jaffna

Introduction

The audit committee plays a key function in the mechanism of corporate governance especially in the process of oversight of financial reporting, risk management and internal control systems. The audit committee is a sub-group of the full board. The audit committee plays a correspondent role between the full board, internal auditor, external auditor, executive officers, and the fund executives.

Audit Committee inspects and manages the process of ascertaining the financial outcome via analyzing the financial statements, carrying out internal audit and significant audit procedures (Klein, 2002). An effective audit committee possesses a qualified and an experienced audit team with sufficient resources, power and supervisory efforts to confirm the reliability of the financial statements, risk management and internal control as well as to protect the interests of stakeholders (Koutoupis and Bekiaris, 2019).

Pincus, Rusbarsky and Wong (1989) stated that during the occasion of severe agency conflict, it is important for the audit committee to communicate to the internal and external auditors. The effectiveness of the audit committee depends on its ability to oversee the financial results with strong individual members and their characteristics of the audit committee (Kalbers and Fogarty, 1993). Moreover, an effective audit committee is expected to focus on the optimization of shareholders' wealth and prevent the maximization of personal interests by the top management (Wathne and Heide, 2000).

According to CA (2017), the audit committee should be composed of at least 3 non- executive directors of which two must be independent. All the members of the audit committee must possess general knowledge on area of finance whereas at least one of whom the chair should have adequate knowledge on regulatory framework, recent and relevant experience financial reporting and control and past experience in finance or accounting. Thus, it is crucial to investigate how the audit committee attributes could impact on the firms' performance. However, it is proved that Audit Committee effectiveness can be built up and improved if the audit committee is comprised of members who are well resourced, independent and are of financial expertise (Iyer, Bamber and Griffin, 2012).

Research Problem

Audit Committee acts effectively in order to limit the agency problems arising from the separation of ownership and control (Abbott L., Parker, Peters, & Raghunandan, 2003; Jensen & Meckling, 1976). It is vital for an audit committee to inspect the preparation of financial statements, manage the risk and follow internal control systems. Sri Lanka as a developing economy has faced several collapses of a few companies during the period of the past 20 years. Among them, failure of Pramuka bank in 2002, Golden Key Plc in 2012 and Touchwood Investments in 2013 were major significant corporate failures (Pakianathan, Samanthi and Ajward, 2019). At the same time, auditors failed to identify the errors and act ethically and as a result they were accused and imprisoned. So, audit committees are criticized and blamed for the misrepresentation of financial statements. Thus, it is of great importance to carry out a study on the audit committee and firms' performance in the context of Sri Lanka.

Most of the studies in relation to audit committee attributes are focusing on different industries in Sri Lanka. However, in recent years a study has not been carried out on the impact of audit committee attributes over the financial performance in the context of the materials sector in Sri Lanka. In addition to this, arguments of different authors are conflicting. Some authors argued that greater the independence of the audit committees', the more it elevates the financial performance of entities (Dissanayake and Bandara; 2018). On the contrary, when the

Audit Committee consists of a large number of independent auditors, then the performance of the firm gets deteriorated (Balagobei; 2018). Since different opinions have been put forward by different scholars, the problem statement of the study could be defined as “to what extent the Audit Committee characteristics impact on the Earnings Per Share?”.

Literature Review

Ravindran, Nagarajah and Anandasayanan (2018) revealed that there is a significant negative relationship between size of the audit committee, audit committee meeting and share price of banking and finance companies, while board size and company age is significant and positively related with share price. The audit committee independence is non-significant and negatively related with share price. Also, they proved that there is negative and non-significant relationship between firm size and share price.

Pratheepkanth (2016) substantiated that the size of the audit committee is not significant, reflecting that more members in the committee is associated with sluggish earnings management practice. Also, the proportion of the audit committee members with accounting knowledge is not significant because active characteristics are effective to deter earnings management practices. Addition to this, it is argued that when performance is significant, two other control variables ‘firm size’ and ‘leverage’ become insignificant.

Amer, Ragab and Shehata (2014) investigated the audit committee characteristics and performance of the firm using a sample of 50 Egyptian listed companies in Sri Lanka. Their findings showed a positive relationship between the proportion of independent directors on the board and the financial performance of the firm, as measured by ROE, results of board meetings showed a positive significant relationship with ROE, CEO duality showed a significant positive relationship with ROE, and the director ownership is positively associated with firm performance as measured by ROE, but the relation is not significant.

Dakhlallah, Rashid, Abdullah and Al Shehab (2020) undertook a research on the Audit Committee and Tobins Q, using a sample of 180 Jordanian companies. Their findings showed evidence that there is a positive and significant association between the audit committee size, audit committee independence, and audit committee financial expertise with Tobin's Q. Their findings were consistent with the concept of both the agency and resource dependence theory, that the audit committee's independence has a positive effect on the performance of the firm. They proved that the performance of the firm can be improved by further financial knowledge and the abilities of the audit committee.

Balagobei and Thirunavukkarasu (2018) evaluated how the audit committee impacts on the organizational performance of 15 companies listed in hotels and travels in Sri Lanka. Their findings revealed that the audit committee attributes such as audit committee independence, audit committee experts and audit committee meetings have a significant impact on the organizational performance of the listed hotels and travels in Sri Lanka. Further, audit committee size was not found to have had a significant impact on the organizational performance.

Balagobei (2017) examined the impact of the audit committee on the value relevance of the accounting information of listed hotels and travels in Sri Lanka. She pointed out that audit committee attributes such as audit committee independence, audit committee experts and audit committee meetings have a significant impact on the book value per share of the listed hotels and travels in Sri Lanka. Further, only the audit committee experts influence the earnings per share. Audit Committee Independence did not show a significant impact on the value relevance of the accounting information.

Dissanayake and Bandara (2018) conducted a study on the impact of audit committee characteristics on the financial performance of 20 listed finance companies in Sri Lanka for the period from 2012 to 2016. The analysis exhibited that audit committee independence and audit committee financial literacy reflected a significant positive relationship with the firms' financial performance. Audit committee meeting frequency significantly affected the return on equity. However, audit committee size did not have a significant impact on the performance of the firm. Gunathilaka and Ranasinghe (2015) in a research conducted on Audit Committee Effectiveness in Sri Lanka, revealed knowledge and experience, role in financial reporting and the role in external auditing of the audit committee positively and significantly affected their effectiveness.

Methods

This study focuses on identifying the impact on earnings per share by the Audit Committee characteristics of listed companies in the material sector. As of 30th June 2020, the companies listed in CSE are 289 under 20 GICS industries. The population of the study was the companies listed under the material sector. There are 23 companies existing under the material sector and the researcher has chosen only 14 companies for a 7-year period from 2012 to 2019 due to the lack of data of some companies. The random sampling method was utilized to select the samples for this study. The data was collected from the annual reports of companies for the years ranging from 2012 to 2019. The research analysis was undertaken with the use of statistical techniques such as descriptive statistics, regression analysis and variance inflation factor test.

The regression model is as follows.

$$EPS = \beta_0 + \beta_1 ACS + \beta_2 ACI + \beta_3 ACFE + \beta_4 ACM + \beta_5 FS + \varepsilon$$

where,

EPS	=	Earnings Per Share
ACS	=	Audit Committee Size
ACI	=	Audit Committee Independence
ACFE	=	Audit Committee Financial Expertise
ACM	=	Audit Committee Meetings
FS	=	Firm Size
$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$ and β_5	=	coefficients
ε	=	Error

Conceptual Framework

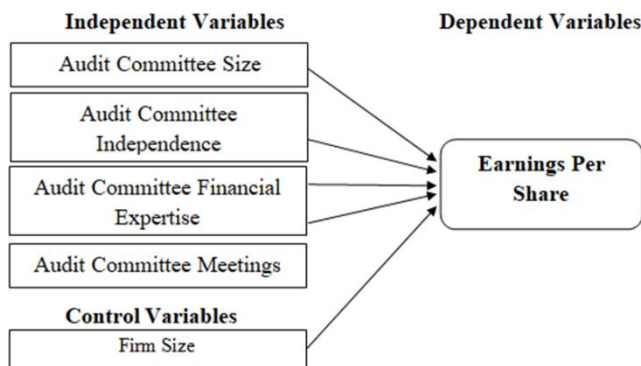


Figure 1: Conceptual Framework

Table 1: Operationalization of the variables

Variables	Acronym	Measurement
Independent Variables		
Audit Committee Size	ACS	Number of audit committee members
Audit Committee Independence	ACI	Proportion of independent directors to audit committee size
Audit Committee Financial Expertise	ACFE	Proportion of audit committee members with financial expertise to the total number of audit committee members
Audit Committee Meetings	ACM	Number of meetings held in a financial year
Control Variable		
Firm Size	FS	The natural logarithm of total assets
Dependent Variable		
Earnings Per Share	EPS	Net profit after tax divided by number of outstanding shares

Hypotheses Formulation

The following hypotheses were formulated as follows:

- H1 - Audit Committee Size has a positive impact on Earnings Per Share.
- H2 - Audit Committee Independence has a positive impact on Earnings Per Share.
- H3 - Audit Committee Financial Expertise has a positive impact on Earnings Per Share.
- H4 - Audit Committee Meetings has a positive impact on Earnings Per Share.

Findings of the study

Table 2: Descriptive Statistics

	EPS	ACS	ACI	ACFE	ACM	FS
Mean	14.13291	3.428571	0.878022	0.807871	4.250000	14.69951
Median	4.859100	3.000000	1.000000	0.833300	4.000000	14.92015
Maximum	711.1937	7.000000	1.000000	1.000000	9.000000	17.23780
Minimum	-19.18650	2.000000	0.500000	0.333300	0.000000	11.43710
Std. Dev.	67.47218	1.340393	0.177862	0.207016	1.545117	1.243298
Observations	112	112	112	112	112	112

The Table 2 shows the Descriptive Statistics of all the variables. Based on the output, the average value of Earnings Per Share is Rs. 14.13 and its median is Rs. 4.86. The maximum and minimum value of Earnings Per Share are Rs. 711.19 and Rs. -19.19 respectively. The audit committee consists of 3 members on average and it ranges from minimum 3 members and maximum 7 members. Also, the mean value of the Audit Committee Independence is 0.878 which reflects that 87.8% of the audit committee members are independent. Audit Committee Financial Expertise's mean value is 0.808 which reveals that 80.8% of audit committee members are with financial expertise. Additionally, the average audit meetings held by the companies in the material sector are 4 with a minimum of 4 meetings and a maximum of 9 meetings. And, the firm size is on average of 14.69 with the standard deviation of 1.24.

Table 3: Regression output

Dependent Variable: EPS				
Method: Panel Least Squares				
Date: 07/12/20 Time: 22:34				
Sample: 2012 2019				
Periods included: 8				
Cross-sections included: 14				
Total panel (balanced) observations: 112				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1415.562	323.8087	-4.371599	0.0000
ACS	0.506933	16.92842	0.029946	0.9762
ACI	-73.94711	77.80907	-0.950366	0.3444
ACFE	64.37568	62.96664	1.022378	0.3093
ACM	9.735045	5.402316	1.431802	0.0456
FS	95.78573	19.81697	4.833520	0.0000
R-squared	0.304799	Mean dependent var		14.13291
Adjusted R-squared	0.290243	S.D. dependent var		67.47218
S.E. of regression	61.46107	Akaike info criterion		11.22807
Sum squared resid	351304.0	Schwarz criterion		11.68925
Log likelihood	-609.7720	Hannan-Quinn criter.		11.41518
F-statistic	2.265232	Durbin-Watson stat		2.509471
Prob(F-statistic)	0.005936			

The Table 3 regression analysis describes the impact; the independent variables have over the dependent variables. Accordingly, the R squared value shows 0.3048 which highlights a 30.48% variation in the dependent variable is explained by the variation in the independent variables. At the same time, the value of F statistic is 2.26 and its p value is 0.005936. Hence, the regression is the best fitted model as its p value is less than 0.05. Additionally, the Durbin Watson stat is 2.50 which reveals that there is a negative auto correlation as it ranges from 2 to 4.

The Audit Committee Size has a coefficient value of 0.506933 and its p value is 0.9762. This clearly reveals that the audit committee size has a positive impact on Earnings Per Share but not at a significant 95% confidence level. Audit Committee Independence negatively and insignificantly effects on Earnings Per Share as the p value is greater than 0.05 ($r = -73.94711$, $p > 0.05$). Also, Audit Committee Financial Expertise possesses a positive coefficient reflecting positive effect on Earnings Per Share and its effect is insignificant ($r = 64.37568$, $p > 0.05$). However, Earnings Per Share is significantly affected by Audit Committee Meetings but shows a positive impact ($r = 9.735045$, $p < 0.05$) whereas Firm Size also impacts on Earnings Per Share positively and significantly.

Table 4: Variance Inflation Factor test

Variance Inflation Factors Date: 07/12/20 Time: 22:42 Sample: 1 112 Included observations: 111			
Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	9737.780	232.9422	NA
ACS	70.00757	22.81193	2.977762
ACI	3858.742	73.89065	2.907755
ACFE	1153.255	19.10092	1.173052
ACM	20.01646	9.761961	1.140689
FS	33.40321	173.7800	1.233237

The Table 4 depicts the Variance Inflation Factor test. The values of Centered VIF of independent variables are less than 10. Thus, the researcher can conclude that there is no multi collinearity problem among the independent variables.

Discussion and conclusions

According to the presentation and analysis, it can be concluded that the audit committee attributes audit committee size, audit committee financial expertise and audit committee meetings excluding the audit committee independence, effect on earnings per share with a positive effect. So, with regard to the findings, the hypotheses H1, H3, H4 and H5 are accepted.

Larger the Audit Committee improves, the greater the firms' financial performance. This clearly shows when the audit committee possesses competent, qualified and experienced members it would enhance the earnings per share. While audit committee independence gets improved, there is a fall in the earnings per share which states that the entity's performance gets weaker when entity appoints more independent directors. Insufficient technical knowledge of independent directors as well as their poor internal control systems and wrong recommendations would have led to the poor performance of the firm. This is consistent with the findings of Balagobei (2018).

Financial performance of organizations improves when audit committee financial expertise gets improved. This represents that whenever the audit team consists of well qualified, competent and experienced members, this would boost the earnings per share. Further, the earnings per share grow with the number of audit committee meetings. When meetings are conducted at a higher frequency, the entity's performance gets upgraded. This is supported with the previous studies made by Pratheepkanth (2016). Based on the above key findings it can be concluded that this study supports the agency theory where agency conflicts can be mitigated.

It would be more beneficial if further attributes can be evaluated and at the same time if all the companies can be considered from the material sector for future studies. Even though the audit committee size improves the financial performance of companies, it is better recommended to reduce the audit committee size which can lead to an increased proportion of earnings due to cost reduction.

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A Study on Blue – Green Economy: Evidence from Sri Lanka

Madara, K. H.¹ and Perera, L. A. S.²

Homo Sapiens in 21st Century focus their attention in making an economy which is not only economically sustainable but also socially and environmentally sustainable and resilient since they have been suffering from environmental and social hazardousness. So the study of green and blue economy has emerged as an area of importance. Current study is aimed to evaluate whether Sri Lankan economy falls into Blue-Green Economy. The research framework captures three classifications and nine variables. This research has used secondary data gathered from Central Bank Reports and World Bank Reports during a period of eighteen years (2000-2018). To analyze the data, it has used descriptive analysis, T – test analysis for one sample t-test and paired mean t-test and content analysis. As a conclusion, it can be determined that there is a blue- green economy in Sri Lanka but it should further reduce the impact of greenhouse gas emissions.

Keywords: *Blue – Green Economy, Economic Transformation, Human Wellbeing, Resource Efficiency*

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¹ Department of Finance, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka (hmadara95@gmail.com)

² Department of Finance, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka (shanakala@kln.ac.lk)

Introduction

As time progressed, the economies were expanding with new technologies as well as the population was increasing exponentially which caused to increase the usage of energy sources, the destruction of forests to build residences, and continuous extinction of unique species, etc. Further, the achieving economic and organizational goals, objectives and commercial strategies delivered the byproduct of air, light, noise, water, land pollution and carbon emissions which affect to the global warming, natural hazards and climate changes. In such circumstances the world questions that “can we continue to be an economically successful and, at the same time an environmentally and socially healthy as well? Emergence of the Blue-Green Economy concept offers a unique opportunity to address these complex and inter-connected challenges, without compromising economic growth to promote inclusive and environmentally sustainable development.

Green Economy is a new approach which arose in the conference of Rio de Janeiro, 2012 (Rio+20) to celebrate the 20th anniversary of the first Rio Earth Summit in 1992. The UNEP defines a Green Economy as “improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities” (Programme, 2012) As well as, the concept of Blue Economy emerged due to the concerns raised by the coastal countries for paying attention to the oceans which cover more than 72% of the Earth’s surface and constitute more than 92% of the biosphere as well as those contribute to the main lifeline of the human kind. World Bank defines Blue Economy as “sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem.”

Sri Lanka is an island nation in the Indian Ocean which has a total area of 65,610km², with 64,630 km² of land and 890 km² of water. The extensive marine waters of the South Asian region around Sri Lanka contain some of the richest concentrations of biodiversity in the world and support the livelihoods and food security of millions of people in Sri Lanka. Yet nowadays, there are many environmental issues in Sri Lanka which have increased the risks of natural disasters and climate changes. Further, Marine, soil and air pollution, land degradation, deforestation, waste generation, loss of coastal and terrestrial biodiversity are identified as major environmental challenges.

In analyzing Green Economy of India, they explain the green economy concept by total renewable electricity generation, adjusted saving: natural resources depletion, energy use, agricultural raw material export, life expectancy at birth and total health expenditure (private + public). Through the research it identifies, except the last indicator of total health expenditure, remaining indicators has significantly contributed in attaining the Green Economy for India. (Prakash, 2016)

According to Ranasinghe, the concept of Blue Economy covers a wide range of activities identified according to the geographical locations, sectors and specializations where it ranges from fishers and aqua culture to renewable ocean energy to marine biotechnology to tourism and costal management. Further she has identified a classification of Blue Economy sectors and activities and implications that are needed to consider achieving Blue Economy. (Ranasignhe, 2017)

(Hasan M., 2018) has identified fishing, aquaculture, food security and tourism, shipping and marine transport, biotechnology and medical technology and renewable marine energy as the most important determinates of the Blue Economy of Bangladesh.

The above research articles have provided the determinates of the Blue and Green Economy. However, Prakesh has researched about Green Economy in India through statistical model. It has identified a gap in researching achievement of Blue & Green Economy in Sri Lanka through a quantitative basis.

Research Problem

In previous studies Green Economy and Blue Economy concepts have been tested separately. Specially in Sri Lankan context, there is a gap in terms of identifying the impact of Blue - Green Economy for sustainable development. Although there are researches conducted in either Blue or Green Economy, the researchers have provided only the determinates of Blue-Green Economy, neither of these researches are conducted to verify whether Sri Lankan economy is aligned with Blue-Green Economy concept methodologically.

Therefore, this study examines the state consisting of nature and extent of the Blue- Green economy with reference to Sri Lanka through empirical analysis by using indicators of Blue-Green economy.

Research Objectives

There are mainly three objectives of the study which are mentioned as follows:

- To examine the nature and realization of Blue - Green economy achieved by Sri Lanka.
- To study Blue - Green economy achievements of pre - war and post- war periods separately.
- To recommend the appropriate suggestions for attaining Blue - Green economy with respect to Sri Lanka.

Literature Review

Initially, the concept of Green Economy was used in the report of Blue Print for a Green Economy of 1989 prepared for the government of the United Kingdom by a group of leading environmental economists (Anil, 1989). Although it has not directly mentioned about the concept of Green Economy, they evaluated the bad impact of the climate changes, GDP is not the accurate measurement to determine the human wellbeing & environmental riskiness and in addition to that they have pointed out the requirement for a change of the society. Further it highlighted the speeches of David Cameron who mentioned Green Economy as a concept which includes not only environmental protection but also social justice, human wellbeing, strength and empowerment of the families.

In 2008, UNEP introduced Green Economy Initiative in order to ensure analyses and political support for investments in green sectors as well as to make conventional, material-consuming and pollution-generating sectors green as a respond to the world crisis. In 2009, Global Green New Deal (GGND) Report which contained a proposal of measures for economic reconstruction and reinforcement of stability of the world economy was introduced. (Armand K. , 2017)

UNEP defined the Green Economy as “one that results in improved human wellbeing and social equity, while significantly reducing environmental risks and ecological scarcities. It is low carbon, resource efficient and socially inclusive” (Programme, 2012) which has been included in the Green Economy Report. Green economy is characterized by a significant increase in investment in sectors of economy creating and reinforcing the natural capital of the Earth or contributing to decrease ecological deficiencies and environmental threats. These sectors include renewable energy, low-emission transport, energy-efficient building, clean

technologies, waste management improvement, sustainable agriculture and forest management and sustainable fishing (Programme, 2012)

Furthermore, during the Rio + 20 Conference potential directions for implementation of the concept of Green Economy were identified with the emphasis on the necessity of continuing promotion of sustainable development through focusing on key problems, i.e. elimination of poverty, ensuring intra- and intergenerational justice, improvement of economic effectiveness and more equitable access to resources (Economic Commission for Africa, 2014). The concept of Green Economy aims at economic transformation to foster improvement of social welfare and justice, at the same time considerably reducing environmental threats and ecological deficiencies. (Armand K. , 2017)

Ocean is the largest natural asset in the world where it covers more than 72% of the Earth's surface and constitutes more than 92% of the biosphere. It contributes to main lifeline of human kind by generating oxygen while absorbing carbon dioxide, recycling nutrients, regulating global climate change and temperature and being the largest home to millions of species of living beings. Further, ocean helps to provide transport for 80% of the Global trade, contributing industries like fishing, tourism, mineral, marine commerce etc., which ultimately caused to increase the national income.

However, due to activities of human kinds and global challenges like global warming, climate changes, melting of glaciers are badly affected to protect the healthiness of this heritage asset as well as its suitable development. On such occurrence the idea of Blue Energy and Blue Economy first emerged as a component of Green Economy at the COP+21 Conference, at a time when the world was moving away from the Millennium goals towards Sustainable Development.

Blue Economy is the suitable use of marine resources for economic purposes where it generates an economy through the usage of marine and oceanic resources. Further, its simplest meaning is that greening of the ocean economy since the concept originated from the boarder Green Economy concept as well as Blue Economy, Blue Growth, Sustainable Ocean Economy are all terms that came into the existence in the very recent past with occurrence of Green Economy. (Ranasighe, 2017)

When it comes to applying Blue Economy for Sri Lankan Context, Sri Lanka is an island with 103 rivers flowing through the country, in which 90% of the land area is covered by the rivers (S.A.M., 2011). Further, as per description of Azmy Sri Lanka's coastal area which constitutes of an area lying within the limit of 300m landwards of the Mean high water line and a limit of 2km seawards of the Mean low water line covers up to 14 administrative districts which is approximately 23% of the total area of the land. 25% of Sri Lankan population's home is the coastal area as well as they are relying on such coastal and oceanic activities as their occupation. Therefore, it is essential for ensuring the suitable development of the ocean.

Research Methodology

The current research has aimed to determine whether Sri Lanka has achieved Blue –Green Economy or not. Sri Lanka is an island which is located in Indian Ocean having some amount of environmental and economic riskiness. Further, Sri Lanka had been suffering from a civil war since 1983 to 2009. Therefore, the research is further objected to analyze the Blue-Green Economy achieved by Sri Lanka segregating into prewar and postwar periods. To accomplish those objectives, it has selected nine variables under three main sessions.

Initially, the researcher has provided descriptive analysis of the variables which provides an idea about the variable behavior and trend by using descriptive measurements as well as using

graphical views. To determine whether Sri Lanka has achieved Blue-Green Economy or not, it has conducted one sample t-test at 95% confidence level. To test whether there is difference, any improvement or decline between prewar period and postwar or not, it has conducted paired sample t-test. To gain further knowledge about the extent to which Green-Blue economy is achieved by Sri Lanka, a policy review has been done which were made under each government in the selected time line under the content analysis. Finally, the researcher has conducted achievement review based on European Union Strategy for 2025.

Data Collection

To accomplish objective one and two of the research study, the secondary data provided by World Bank (National Development Indicators) and Report of Central Bank Sri Lanka were used and these data were gathered during the period 2000 to 2018 under the each identified variables. The period from 2000 to 2009 and 2010 to 2018 are considered as pre-war period and post-war period respectively. Hereby, the sample size of each variable is set as 18 years.

To further analyze data behaviors and Blue – Green Economy achieved by governments of Sri Lanka in each period, it has used qualitative data gathering. To accomplish such tasks, it has referred to annual performance reports, Central Bank reports, annual budgets and government policy reports to identify policies which were made by each government.

Data Analyzing

The researcher has analyzed, gathered quantitative data using descriptive techniques to get the initial understanding of data behavior and data distribution by the way of descriptive analysis and graphs. Further through T- test using t-value testing it is analyzed whether Sri Lanka has Blue- Green Economy or not.

It further analyzed, gathered qualitative data using content data analysis technique with the actions and implementations which were taken under each government to achieve Blue – Green Economy in both pre-war and post-war periods. Finally, the achievement of each target which is given by European Union 2025 by Sri Lanka has been elaborated for both pre-war period and post-war periods.

Variable Identification

As per the referred literature mainly there are three boarder categories of Green Economy. (Ben, 2018). Those are Economic Transformation, Resource Efficiency and Human Wellbeing. Economic Transformation means economic activities are transferring from high emission, heavily polluting, waste generating, resource intensive and ecosystem damaging activities to low carbon, clean energy, waste minimizing, resource efficient and ecosystem enhancing activities.

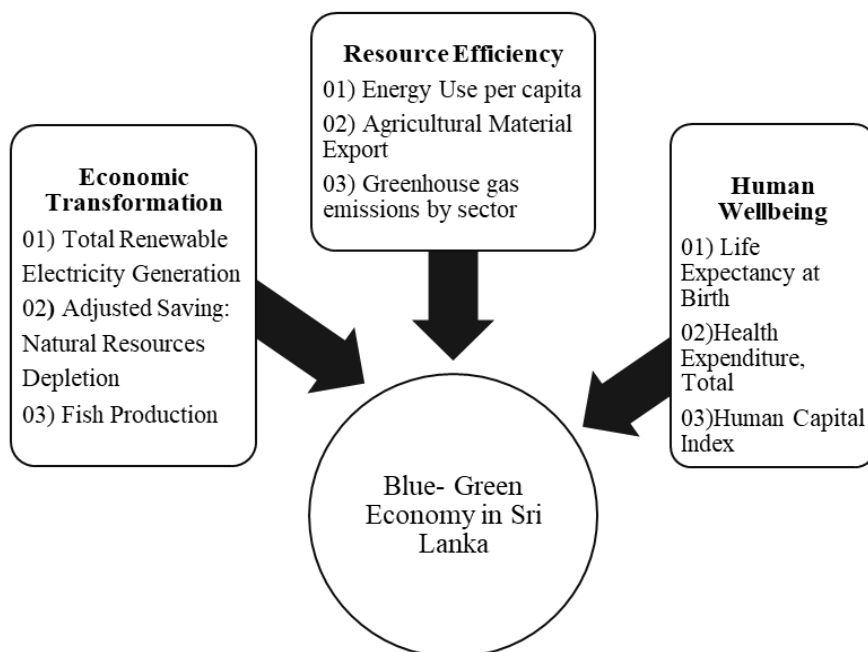
Under the Resource Efficiency, it discusses the use of materials, energy, water, land, changes to ecosystems, generation of waste and productions of harmful materials related to economic activities.

Human Wellbeing refers to increasing human and social capital by enhancing and fulfilling basic human needs for all citizens, increment of education level, health status, and employment generation for each sector, human development index and deduction in poverty level (Bank, 2019)

Based on above literature, it has selected nine variables to determine the achievement of Blue Green Economy. The selection criteria of the variables depends on the nature of Sri Lankan

Economy as well as availability of data. Therefore, accordance with Sri Lankan Economy, it has selected the best variables to determine the achievement of Blue-Green Economy.

Table 1 : Conceptual Framework



Results and Discussion

Descriptive Analysis

Descriptive analysis provides the behavior of each variable by segregating to pre-war period and post-war period. The summary is shown below.

Table 2 – Summary of Descriptive Analysis

Variable	Pre-war Period	Post-war Period
Gross Electricity Generation	Up wording Trend	Up wording Trend
Adjusted savings: Natural Resource Depletion	Fluctuating Trend	
Fish Production	Up wording trend other than 2005	Up wording Trend
Energy usage per capita	Up wording Trend	Fluctuating Trend
Agricultural material exports	Up wording Trend	Up wording Trend

Greenhouse gas emission by sector	Fluctuating Trend	Distributed around the mean value
Life expectancy at birth	Up wording Trend	Up wording trend other than 2018
Total health expenditure	Up wording Trend	Up wording trend
Human Capital Index	Up wording Trend	Up wording trend other than 2018

T-Test

To evaluate whether Sri Lanka has achieved a Blue-Green economy or not, it has conducted one sample t-test the time period from 2000 to 2018. The summary of the results is shown below.

Table 3 – Summary of One Sample T-Test

One sample T-test (Two tailed test) at 0.05% Significance Level							
Sr. No	Hypothesis	Degree of freedom	Test Value	T Value	Mean Difference	P Value	Decision (Accept or reject)
01	H ₀ -There is no significant contribution by renewable electricity generation to Blue - Green Economy in Sri Lanka	18	12,000	-2.455	-1504.947	0.024 (p<0.05)	H ₀ - Rejected
	H ₁ -Renewable electricity generation has significantly contributed to Blue- Green Economy in Sri Lanka						H ₁ - Accepted
02	H ₀ -No significant depletion in natural resources has taken place in Sri Lanka	18	0.09	1.304	0.00684	0.209 (p>0.05)	H ₀ - Accepted
	H ₁ - A significant depletion in natural resources has						H ₁ - Rejected

	taken place in Sri Lanka						
03	H ₀ -There is no significant contribution by fish production to Blue Economy in Sri Lanka	18	450,000	-2.5	-70,692.1	0.0241 (p<0.05)	H ₀ - Rejected
	H ₁ -Fish production has significantly contributed to Blue Economy in Sri Lanka						H ₁ - Accepted
04	H ₀ - Average Energy usage per capita in Sri Lanka is not efficient	18	25	-3.980	-8.87649	0.001 (p<0.05)	H ₀ - Rejected
	H ₁ -Average Energy usage per capita is efficient in Sri Lanka						H ₁ - Accepted
05	H ₀ -There is no significant export of agricultural materials by Sri Lanka	18	70,000	-3.355	-17,094.58	0.004 (p<0.05)	H ₀ - Rejected
	H ₁ -There is significant export of agricultural raw materials by Sri Lanka						H ₁ - Accepted
06	H ₀ -There has no significant greenhouse gas emissions by sectors in Sri Lanka	18	3	4.811	0.29684	0.0001 (p<0.05)	H ₀ - Rejected
	H ₁ -There has significant greenhouse gas emissions by sectors in Sri Lanka						H ₁ - Accepted

07	H ₀ -There is no significant improvement in life expectancy at birth in Sri Lanka	18	76	-3.265	-1.074	0.004 (p<0.05)	H ₀ – Rejected
	H ₁ -There is significant improvement in life expectancy at birth in Sri Lanka						H ₁ - Accepted
08	H ₀ -There is no significant expenditure on health by government in Sri Lanka	18	150000	-3.97	-58251	0.0009 (p<0.05)	H ₀ – Rejected
	H ₁ -There is significant expenditure on health by government in Sri Lanka						H ₁ - Accepted
09	H ₀ -There is no significant Human Development Index in Sri Lanka	18	0.8	-5.924	0.0599	0.00001 (p<0.05)	H ₀ – Rejected
	H ₁ - There is significant Human Development Index in Sri Lanka						H ₁ - Accepted

Paired mean t-test has been conducted to identify the difference between pre-war period and post-war period. The results of paired mean t-test have been shown as a table.

Table 4 : Summary of Paired Mean T-Test Results

Sr. No	Hypothesis	Degree of Freedom	T - Value	Mean	P- Value	Decision (Accept or reject)
01	H ₀ - There is no mean difference between gross electricity generation in prewar period & postwar period	8	- 22.13	- 4,262.72	0.000000018 (p<0.05)	H ₀ – Rejected
	H ₁ - There is significant difference between gross electricity generation in prewar & post war period					H ₁ - Accepted
02	H ₀ - There is no mean difference between adjusted natural resources depletion in prewar period & postwar period	8	7.429	0.029	0.00007(p<0.05)	H ₀ – Rejected
	H ₁ - There is significant difference between adjusted natural resources depletion in prewar & post war period					H ₁ - Accepted
03	H ₀ - There is no mean difference between fish production in prewar period & postwar period	8	-8.1	- 224,814.	0.00004 (p<0.05)	H ₀ – Rejected
	H ₁ - There is significant difference between fish production in prewar & post war period					H ₁ - Accepted

04	H ₀ - There is no mean difference between energy usage per capita in prewar period & postwar period	8	-	5.506	-15.28	0.001 (p<0.05)	H ₀ – Rejected
	H ₁ - There is significant difference between energy usage per capita in prewar & post war period						H ₁ - Accepted
05	H ₀ - There is no mean difference between agricultural materials in prewar period & postwar period	8	-	5.26	-32,508	0.001 (p<0.05)	H ₀ – Rejected
	H ₁ - There is significant difference between agricultural materials in prewar & post war period						H ₁ - Accepted
06	H ₀ - There is no mean difference between greenhouse gas emissions by sector in prewar period & postwar period	8	-	0.502	-0.08111	0.629 (p>0.05)	H ₀ – Accepted
	H ₁ - There is significant mean difference between greenhouse gas emissions by sector in prewar period & postwar period						H ₁ - Rejected
07	H ₀ - There is no mean difference between life expectancy at birth in prewar period & postwar period	8	-	5.765	-1.69	0.0004 (p<0.05)	H ₀ – Rejected
	H ₁ - There is significant difference between life expectancy at birth in prewar & post war period						H ₁ - Accepted
	H ₀ - There is no mean difference between total health expenditure in						

08	prewar period & postwar period	8	-9.413	-97,347	0.00013 ($p < 0.05$)	H ₀ – Rejected
	H ₁ - There is significant difference between total health expenditure in prewar & post war period					H ₁ - Accepted
09	H ₀ - There is no mean difference between human capital index in prewar period & postwar period	8	0.465	0.01	0.654 ($p > 0.05$)	H ₀ – Accepted
	H ₁ - There is significant difference between human capital index in prewar & post war period					H ₁ - Rejected

Content Analysis

The content analysis provides the government policies analysis and comparison of EU 2025 strategy. For convenience of the study the governments have indicators as follows afterwards.

- Government A – President Mrs. Chandika Bandaranayake Kumarathunga (2000-2004)
- Government B – President Mr. Mahinda Rajapaksha (2005-2014)
- Government C- President Mr. Maithripala Sirisena

The summaries for each content analysis have been provided below.

Table 5 : Summary of Government Policies Analysis

Variable	Government A (2000-2004)	Government B (2005-2014)	Government C (2015-2018)
01. Gross Electricity Generation	✓	✓	✓
02. Adjusted Savings: Natural Resource Depletion	✓	✓	✗
03. Fish Production	✓	✓	✓
04. Energy Usage per Capita	✗	✓	✓
05. Agricultural Material Exports	✓	✓	✓
06. Greenhouse Gas Emissions by Sector	✗	✓	✗
07. Life Expectancy at Birth	✓	✓	✓
08. Total Health Expenditure	✓	✓	✓
9. Human Capital Index	✓	✓	✓

Table 6 : EU 2025 Strategy achieved by Sri Lanka

No	Indicators	Headline targets	In pre-war period (2009)	In post-war period (2018)	Conclusion
01)	Employment rate	75% of the population aged 20-64 should be employed	20 -24 - 84.9%	20-24 - 86.5%	Satisfied
			30-39 - 96.4%	30-39 - 97.3%	
			40-Above- 98.6%	40- Above - 99.1%	
02)	Gross domestic expenditure on R&D (GERD)	3% of the GDP should be invested in R&D	0.14%	0.109% (2015)	Not still satisfied
03)	Greenhouse gas emissions, base year 1990	Reduction of the greenhouse gas emissions by 20% compared to 1990	From 2.72 to 3.2	From 2.72 to 3.01	Not still satisfied
04)	Share of renewables in gross final energy consumption	Increase in the share of renewable energy sources in final energy consumption to 20%	63 (Low Income)	52.38 (Low income)	Not still satisfied
05)	Energy	Energy intensity of the economy	Less energy intensity	Less energy intensity	Satisfied

	intensity of the economy				
06)	Early leavers from education and training	The share of early school leavers should be under 10%	47%	27%	Not satisfied
07)	Tertiary educational attainment	At least 40% of 30-34 years old should have	12.48%	12.55% (2015)	Not satisfied
		completed a tertiary or equivalent education			

Conclusion and Recommendation

The conclusion of this research paper has been divided among main three sessions and final results are evaluated based on that.

When it is considering the session, economic transformation, in descriptive analysis it has identified clear up word trend in gross electricity generation where it caused to have an up wording of electricity per capita. Natural asset depletion had fluctuating trend in studied period and fish production had up wording trend throughout the period. The natural resource depletion has provided sufficient evidence to accept the null hypothesis by confirming there is no sufficient depletion in natural resources which has taken place in Sri Lanka. The only indicator of Blue Economy which was fish production also having positive trend where it can be determined that there is significant Blue Economy achievement in Sri Lanka.

Further, Sri Lanka has increased generating renewable electricity generation with the time. Fish production has also significantly increased when compared to pre-war period and post-war period. By indicating the way forward of Green Economy of Sri Lanka, the depletion of natural depletion has decreased throughout the period.

Although there were policy implications to provide more renewable electricity energy sources and maximize the capacity and as well as for achievement towards Blue Economy in each government, it was not able to find government policies to reduce natural resource depletion for Government C. That is one of the lacking area which is noted under this research paper. Therefore, it is better if government has well improved governing policy to mitigate over natural resource depletion percentage.

The second session, resource efficiency is based on three variables and most probable an up wording trend is provided by energy per capita and agricultural raw material exports. Greenhouse gas emission has provided fluctuating trend throughout the period. However, only energy per capita and agricultural raw materials have indicated that there is a positive trend towards Green Economy other than greenhouse gas emission. Further, energy usage per capita and agricultural material exports have significantly decreased when compared with the prewar period. However, greenhouse gas emission has not decreased when compared with the pre-war period although which is accepted by a Green Economy.

However, under *Mahinda Chinthana* Vision (Government B) it had made policies to reduce the effect of greenhouse gas emission but that was not found from the other two governments. On the other hand, the third achievement of EU strategy is not satisfied where it is required to

reduce the greenhouse gas emission by 20%. Further, share of renewables in gross final energy consumption is having a high value, 52.3% which indicates a bad sign of the Green Economy. Therefore, it has to consider about how to reduce greenhouse gas emission and share of renewables in gross final energy consumption.

When it comes to Sri Lanka, she has remarked the good performance in human wellbeing while comparing it with her peer countries since the government's main attention give the human wellbeing of the country. Therefore, in descriptive analysis there are up wording trend for every variable. A significant drop has been noted in the life expectancy at birth and human capital index in 2018. In one sample t-test, all three variables have provided positive trends towards a Green Economy. However, with the drop of 2018 in human development index, there are no evidence to determine that there is a difference or improvement in post-war period when compared to pre-war period.

Although there is a better education system in Sri Lanka, it should be further developed to provide tertiary education to all those who have completed their secondary education. As well as there should be proper program to early school leavers for further education or employment. Further, Sri Lankan government should give more attention of research and development since it causes to occur new innovation to the country.

To greening the country, the government should pay more attention on environmental risks such as reducing greenhouse gas emission, reducing natural asset depletion as they did in social and economic aspects, since throughout the research it was identified that there is a lack of preventive methods to reduce environmental risks in the country.

As guidance to future researchers, it can be better to increase the number of variables related to achievement of Blue Economy. Further, it is better to add more qualitative data by discussing with policy makers, environmentalist and socialist.

The research has constrained by several limitations such as, it has been identified that there are not much of literature available since the concept is new to the world. Further, the discovered Green Economy Concept is much broader. However, the research may cover based only on the referred literature and identified variables. Therefore, the conducting research should be limitedly scoped. Further, even though this has recognized number of variables in the chapter of literature review, there are only six variables that have been selected to determine whether Sri Lanka has Green Economy or not. Since some data could not be found for Sri Lankan context, some variables were removed.

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Annex

ANNEX 01- RESULTS OF ONE SAMPLE T-TEST

01– Gross Electricity Generation

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
EG0001	19	6,625	15,255	10,495	2,672
Valid N (listwise)	19				

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
EG0001	19	10,495	2,672	613

One-Sample Test

	Test Value = 12000					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
EG0001	(2.46)	18	0.02	(1,504.95)	(2,792.64)	(217.25)

02– Natural Resource Depletion in prewar

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ADU001	19	.06	.13	.0968	.02286
Valid N (listwise)	19				

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
ADU001	19	.0968	.02286	.00525

One-Sample Test

	Test Value = 0.09					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
ADU001	1.304	18	.209	.00684	-.0042	.0179

03– Fish Production in Prewar**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
FP0001	19	163,230	535,050	379,308	125,071
Valid N (list wise)	19				

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
FP0001	19	379,308	125,071	28,693

One-Sample Test

	Test Value = 450000					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
FP0001	-2.464	18	.024	(70,692.11)	(130,974.60)	(10,409.61)

04– Energy per Capita in prewar**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
ENER001 Valid N (listwise)	19 19	3.58	31.42	16.1235	9.72156

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
ENER001	19	16.1235	9.72156	2.23028

One-Sample Test

	Test Value = 25					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
ENER001	-3.980	18	.001	-8.87649	-13.5621	-4.1909

05 Agricultural Material Exports in Prewar**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
AGR001 Valid N (listwise)	19 19	26,047	102,364	52,905	22,208

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
AGR001	19	52,905	22,208	5,095

One-Sample Test

	Test Value = 70000					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
AGR001	-3.355	18	.004	(17,094.58)	(27,798.41)	(6,390.75)

06 – Greenhouse gas emissions in prewar**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
GR001 Valid N (listwise)	19 19	2.99	4.08	3.2968	.26893

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
GR001	19	3.2968	.26893	.06170

One-Sample Test

	Test Value = 3					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
GR001	4.811	18	.000	.29684	.1672	.4265

07 – Life expectancy at Birth**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
VAR00001 Valid N (listwise)	19 19	71.33	76.65	74.9263	1.43349

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
VAR00001	19	74.9263	1.43349	.32886

One-Sample Test

	Test Value = 76					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
VAR00001	-3.265	18	.004	-1.07368	-1.7646	-.3828

08– Health Expenditure**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
VAR00002	19	18,772.00	218,461.00	91,748.79	63,931.15
Valid N (list wise)	19				

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
VAR00002	19	91,748.79	63,931.15	14,666.81

One-Sample Test

	Test Value = 150,000					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
VAR00002	-3.972	18	.001	(58,251)	(89,065.04)	(27,437.38)

09– Human Capital Index**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
VAR00003	19	.58	.78	.7401	.04411
Valid N (list wise)	19				

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
VAR00003	19	.7401	.04411	.01012

One-Sample Test

	Test Value = 0.8					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
VAR00003	-5.924	18	.000	-.05995	-.0812	-.0387

ANNEX 08- RESULTS OF PAIRED MEAN T- TEST**Gross Electricity Generation****Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	REA0001	8,566.56	9.00	1,286.49	428.83
	REA0002	12,829.22	9.00	1,557.29	519.10

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	REA0001 & REA0002	9.00	0.93	0.00

Paired Samples Test

Paired Samples Test									
		Paired Differences							
				Std. Err or Me an	95% Confidence Interval of the Difference				
					Lower	Upper			
		Mean	Std. Deviati on				t	df	Sig. (2- tailed)
Pa ir 1	REA0 001 - REA0 002	(4,262.6 7)	578	193	(4,70 7)	(3,819)	(22.13)	8	0.0000000 18

Adjusted Savings: Natural Resources Depletion**Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	ADU0001	.1100	9	.01871	.00624
	ADU0002	.0811	9	.01691	.00564

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	ADU0001 & ADU0002	9	.790	.011

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	ADU0001 - ADU0002	.029	.012	.004	.020	.038	7.429	8	.000

Fish Production**Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	FP0001	272,190.0	9.0	54,361.7	18,120.6
	FP0002	497,004.4	9.0	51,143.0	17,047.7

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 FP00001 & FP00002	9.0	(0.2)	0.5

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	FP0001 - FP0002	(224,814)	83,189	27,730	(288,759)	(160,870)	(8.1)	8	0.00004

Energy usage per capita

Paired Samples Statistics									
		Mean	N	Std. Deviation	Std. Error Mean				
Pair 1	ENE001	9.1667	9	5.08355	1.69452				
	ENE002	24.4444	9	5.95506	1.98502				
Paired Samples Correlations									
		N	Correlation	Sig.					
Pair 1	ENE001 & ENE002	9	-.132	.735					
Paired Samples Test									
		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	ENE001 - ENE002	-15.3	8.3	2.8	-21.7	-8.9	-5.506	8	.001

Agricultural material exports

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	AGR0001	37,875	9	5,519	1,840
	AGR0002	70,383	9	20,513	6,838

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	AGR0001 & AGR0002	9	.472	.199

Paired Samples Test									
		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	AGR0001 - AGR0002	(32,508)	18,555	6,185	(46,771)	(18,246)	(5.26)	8	.001

1. Greenhouse gas emissions by Sector

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pai	GR00001	3.2544	9	.19060	.06353
r 1	GR00002	3.3356	9	.35008	.11669

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 GR00001 & GR00002	9	-.571	.108

Paired Samples Test

		Paired Differences					t	d f	Sig. (2- tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	GR00001 - GR00002	-.08	.48	.16	-.45	.29	-.502	8	.629

2. Life expectancy at birth

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	LE001	74.2833	9	1.04794	.34931
	LE002	75.9689	9	.46980	.15660

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 LE001 & LE002	9	.558	.118

Paired Samples Test

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	LE001 - LE002	-1.7	0.9	0.3	-2.4	-1.0	-5.8	8	.0004

8. Total health expenditure**Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error
Pair 1 THE001	47,022.78	9	21,728	7,243
THE002	144,369.56	9	52,225	17,408

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 THE001 & THE002	9	.986	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	THE001 - THE002	(97,346.78)	31,024	10,341	(121,194)	(73,500)	-9.413	8	.00001

9. Human Capital Index**Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error
Pair 1 HUB0001	.7484	9	.01242	.00414
HUB0002	.7384	9	.06062	.02021

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 HUB0001 & HUB0002	9	-.215	.578

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	HUB0001 - HUB0002	.010	.064	.021	-.040	.060	.465	8	.654

A Systematic Literature Review on Forensic Accounting

Wijerathna, A. G. H. S. K.¹ and Perera, H. A. P. L.²

The objective of this study is to systematically analyze the existing literature on forensic accounting and thereby identifying the existing gap in the forensic accounting literature. In the era of increasing accounting scandals, the importance of forensic accounting is also increasing. This study provides an overview of previous studies which have been conducted in the area of forensic accounting which can be used by professionals, regulators, academics, researchers, forensic accounting practitioners and etc. The current study systematically analyzes a sample of twenty-four (24) research articles which have been conducted in the broad area of forensic accounting. The sample has been selected from research articles published during the period starting from 2015 to 2020. The results of this study reveal importance of incorporating forensic accounting education into undergraduate and graduate level courses. More importantly, Forensic Accountants should have skills in multi-disciplinary areas. Similarly, knowledge on big data is essential to be a good Forensic Accountant. Further, this study suggests four (04) key areas for future researches which are; importance of forensic accounting education, how forensic accounting could be used to reduce financial collapses practical application of forensic accounting, and the role of Forensic Accountant in the field of auditing.

Keywords: *Accounting, Auditing, Forensic Accounting, Fraud, Systematic Literature Review*

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¹ Department of Accountancy, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka (*harshanishashikala99@gmail.com*)

² Department of Accountancy, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka

Introduction

The prerequisite for forensic accounting was created by the increased number of corporate scandals in the world. As a consequence of the global meltdown and collapse of Enron, World.Com and Parmalat, the necessity for the establishment of procedures and controls designed by the forensic accountants and auditors in detecting, preventing and responding to frauds was arisen (Popoola, et al., 2015). These corporate scandals led to erosion of investor confidence on financial markets. The frequency of number of incidents of Accounting/ Financial Statements frauds in the global context was 28% during the two years' period of 2018 and 2019. Further, the total losses reported as a consequence of the frauds during the years 2018 and 2019 is, USD 42 Billion (PricewaterhouseCoopers, 2020).

After the major corporate scandals of Enron, World.Com, many standards, rules and regulations including Sarbanes-Oxley Act in 2002 were introduced to reduce or eliminate the occurrence of corporate scandals. Regardless of the efforts that were taken to prevent and investigate frauds, every day a new kind of fraud is appearing (Prabowo, 2013). This has created the need of Forensic Accountants and the forensic accounting skills globally (Kranacher, et al., 2008).

Detecting and preventing frauds was identified as a part of accounting functions and the internal or external Auditors were supposed to detect and prevent frauds. However, later it was noted that Auditors do not have a responsibility to fraud prevention and detection, and they can only check the compliance of the company's financial statements to accounting and other relevant rules and regulations for financial reporting. As a result, the new category of accounting emerged, which is, "Forensic Accounting". The emergence of Forensic Accounting was to detect the fraudulent transactions taking place in business organizations (Bhasin, 2007).

According to Hopwood, et al. (2008), the application of investigative and analytical skills for the purpose of resolving financial matters in a manner that meets the standards required by the court of law is Forensic Accounting. Further, Forensic Accounting is also described as the integration of specialized accounting knowledge, enhanced skills and positive mental attitudes to resolve legal issues (Popoola, et al., 2013). The main task of the Forensic Accountants is to carryout investigations due to the manifestation of criminals in the areas of fraud, white collar crime, corruption, money laundering, computer fraud, conversion and theft (Popoola, et al., 2015). Fraud is the main concept that is related with the Forensic Accounting. Fraud is defined as an intentional Act designed principally to deceive or mislead another party (Arens & Loebbecke, 1996).

According to Bhasin (2007), Forensic Accountants obtain an understanding of business information and financial reporting information, financial reporting systems, accounting and auditing standards and procedures, evidence gathering and investigative techniques, and litigation processes and procedure, in order to perform their work. Further, Forensic Accountants play an important proactive risk reduction role by acting as specialists in statutory audits by designing and performing extended procedures, acting as advisors to audit committees, and assisting in investment analyst research. Moreover, when considering about the role of Forensic Accountants, they are experts in looking behind the numbers and deal with business realities situations (Bhasin, 2007).

Forensic Accounting is an emerging area of the researchers' interest. However, in Sri Lanka, still many studies have not been undertaken under this area. In Sri Lanka, there are a very few studies on this. In an era where number of corporate scandals are occurring in Sri Lanka, Forensic Accounting is an important topic to be discussed. Moreover, as Sri Lanka is in the

process of economic transformation with the gradual development of the economy, accounting information has more value. Under this situation the public should have more confidence on the accounting information which one party cannot do alone.

Even though many Governing Bodies and guidelines have been issued for the ethical conduct of the businesses in Sri Lanka such as Central Bank of Sri Lanka (CBSL), Sri Lanka Institute of Chartered Accountants (CA Sri Lanka), Securities and Exchange Commission, Sri Accounting and Auditing Monitoring Standard Board (SLAASMB) and Corporate Governance Code, still there are corporate scandals happening in Sri Lanka. One of the recent examples is the collapse of E.T.I. Finance Company PLC. It is questionable how this was possible as the Banking and Financing companies are operating in a highly regulated environment. Even though the Financial Statement audits were performed by the external Auditors, they are unable to identify the frauds in the Financial Statements. Further, the external Auditors do not have a responsibility to detect frauds in the Financial Statements. The engagement letter of the external Auditors specifically mention that the detection of frauds is not their responsibility. In light of this the need for Forensic Accountants arises.

As the Forensic Accounting is an emerging area and there is an increased need for Forensic Accountants and forensic accounting, this study attempts to identify whether this has been sufficiently addressed by the literature on forensic accounting. Accordingly, the current study attempts to analyze the existing literature on Forensic Accounting by incorporating the Systematic Literature Review (SLR) methodology. Even though studies have been done in different areas under the umbrella term “Forensic Accounting”, no any Systematic Literature Review (SLR) which has considered all the studies published under this umbrella term is conducted. As the main purpose behind this study is to identify an existing research gap in the area of Forensic Accounting, this study would be useful for future researchers in this area.

Methodology

This study is aimed at systematically reviewing the existing literature on Forensic Accounting. The systematic approach which uses to review the literature on specific areas, has the ability to explain the mechanism of its operations and cover the whole area of literature relevant to the area of studies (Fink, 2005).

Accordingly, the “Systematic Literature Review” methodology has been integrated in this study. Systematic Literature Review (SLR) is the most appropriate methodology to incorporate when reviewing existing literature in a specific areas (Aquilani, et al., 2017; Tranfield, et al., 2003; Kitchenham, et al., 2009). As explained in the literature the systematic review process can be divided in to eight (08) phases as represented in the figure 01.

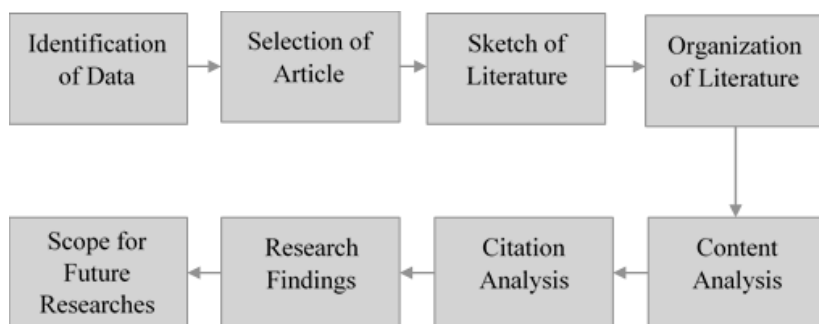


Figure 01: Systematic Review Process (Source: Kayani & Gan (2019))

In order to obtain the previous studies that have done in the area of Forensic Accounting, number of searches were conducted in electronic databases. The population is all the studies that have been done in the area of Forensic Accounting.

Accordingly, the search for the studies was conducted in the following four recognized electronic data bases which are; Emerald Insight, Taylor & Francis Group, OXFORD University Press and JSTOR. These four (04) data bases were selected due to two main reasons. The first reason is, these four data bases are well known publishers of journals and these are within the top fifteen (15) journal publishers in the world (Aithal & Aithal, 2916). The second reason is, these data bases only consist of quality research papers and replicate research studies are not published in these data bases.

The searches in the each of the above four (04) electronic data bases were performed using the key terms “Forensic Accounting”. Further, only the peer-reviewed “Journal Articles” published in Forensic Accounting were considered for the sample selection.

The sample selection was done in five steps. The initial exploration was done using the key terms “Forensic Accounting”. The next screening was done based on the time period. The time period considered for this study was from 2015 to June 2020. This period was selected with the aim of analyzing recent literature in this area. This step was followed by the search based on the “field”. This search option is available under advance search options. The results of the screening under step one and step two, included many studies which were not relevant for the study under consideration. In order to eliminate such irrelevant studies, in step three a filtering was done for the abstract or title or full texts which inclusive of key terms “Forensic Accounting”. The search options available based on the field varies depending on the electronic database. However, the authors were unable to perform this step in “JSTOR” electronic database as the “field” option was not available in this electronic database. Therefore, without performing step 03, step 04 had to be performed, when selecting a sample from JSTOR electronic database.

Under the step four, only the research articles that the authors have access were considered. Finally, the studies which approached step four were further, analyzed to identify whether they are relevant for the current study. All the studies which approached step four were not in the scope of the study. Therefore, those studies were eliminated from the sample. The sample which was selected through the above steps is twenty-four (24) research articles.

The number of studies which were emanated as the result of filtering under each of the above first four steps and the final sample selected under each electronic data base is summarized in table no 01.

Table 01: Sample Selection

Electronic Database	Step 01	Step 02	Step 03	Step 04	Sample
	No of Articles	No of Articles	No of Articles	No of Articles	
Emerald Insight	Over 2,000	993	37	20	17
Taylor & Francis Online	26,115	6,815	11	7	4
OXFORD University Press	10,615	3,133	15	14	3
JSTOR	997	98	-	-	-
Total	Over 39,727	11,039	63	41	24

Results

The studies which met the eligibility criteria is analyzed under this section. A detailed analysis of the results of each study in the sample has been performed under this section, in order to accomplish the objective of the current study. With the aim of performing a clear analysis, the selected studies were categorized based on the following four (04) key areas.

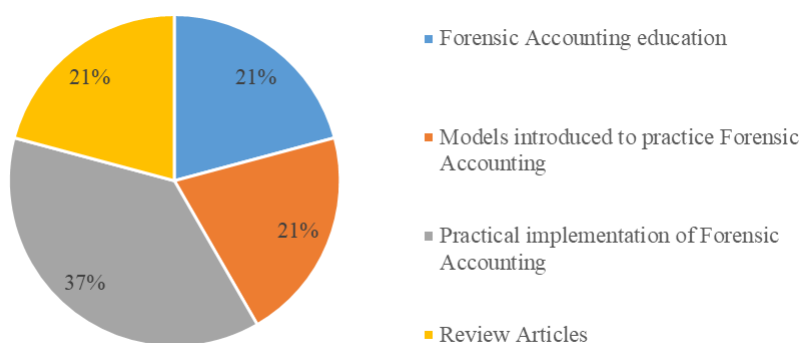
- Forensic Accounting Education
- Models incorporated in practicing Forensic Accounting
- Practical implementation of Forensic Accounting
- Review articles on Forensic Accounting

Out of the twenty-four (24) articles in the sample, from each of the categories of Forensic Accounting Education, Models incorporated in practicing Forensic Accounting, and Review articles on Forensic Accounting five (05) articles are available. As a percentage each of these represents 21% of the sample. Further, nine (09) articles out of twenty-four (24) articles in the sample represent third key area listed above which is, Practical implementation of Forensic Accounting. The graphical representation of the sample composition based on the above four (04) key areas is depicted in figure 02.

Table 02: Sample Composition

Description	No of Researches
Forensic Accounting education	5
Models introduced to practice Forensic Accounting	5
Practical implementation of Forensic Accounting	9
Review Articles	5
Total	24

Figure 02: Sample composition



Before, analyzing the selected articles, an analysis of sample characteristics was performed as the first step.

Sample Characteristics

The sample size of this study is twenty-four (24). The characteristics of the sample was analyzed based on three criteria which are; Year of publication, Region and Data collection method.

The studies which were selected for this study is in the six (06) years period starting from 2015 to 2020. Out of the twenty-four (24) studies in the sample, the highest number of publications, numerically, seven (07) studies have been published in the year 2020. Lowest number of publications which is one (01) is done in the year of 2019. The Figure 03 represents the number of articles published in each year of period under the consideration of this study.

The sample consists of studies done in the regions of, Asia, Europe, America, Oceania, and Africa. Majority of the studies in the sample are based on the American region. As a percentage it is, 37%. The dispersion of the studies based on the region is depicted in the figure 04.

The third characteristic that is used to analyze the sample is, data collection method. Accordingly, the sample was divided in to two categories as studies which have incorporated primary data collection method and studies which have incorporated secondary data collection method. Out of twenty-four (24) studies in the sample, two (02) studies were based on both primary and secondary data collection methods. Many studies have been done based on the secondary data collection method. Studies which incorporating primary data collection method, have integrated surveys and interviews as the primary data collection method.

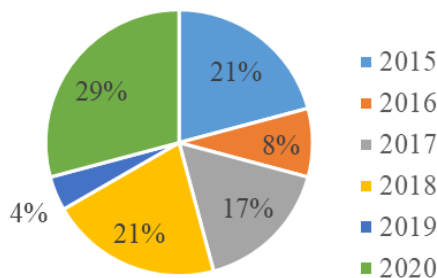


Figure 03: Sample Characteristic – Year of Publication

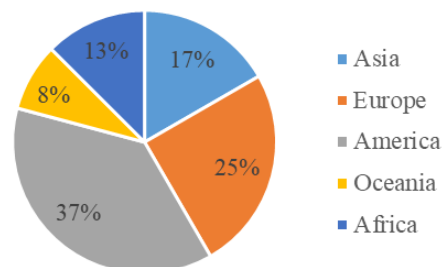


Figure 04: Sample Characteristic – Region

Graphical representation of composition of the sample based on data collection method is depicted in the figure 05.

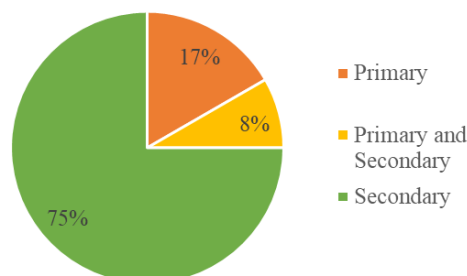


Figure 05: Sample Characteristic – Data Collection Method

PRISMA Model

The “Preferred Reporting Items for Systematic Reviews and Meta-Analyses” (PRISMA) model has been incorporated in this study in order to provide evidence as to how the minimum set of items to be analyzed in this systematic review has been identified. The below diagram depicts the PRISMA Flow diagram developed for this study.

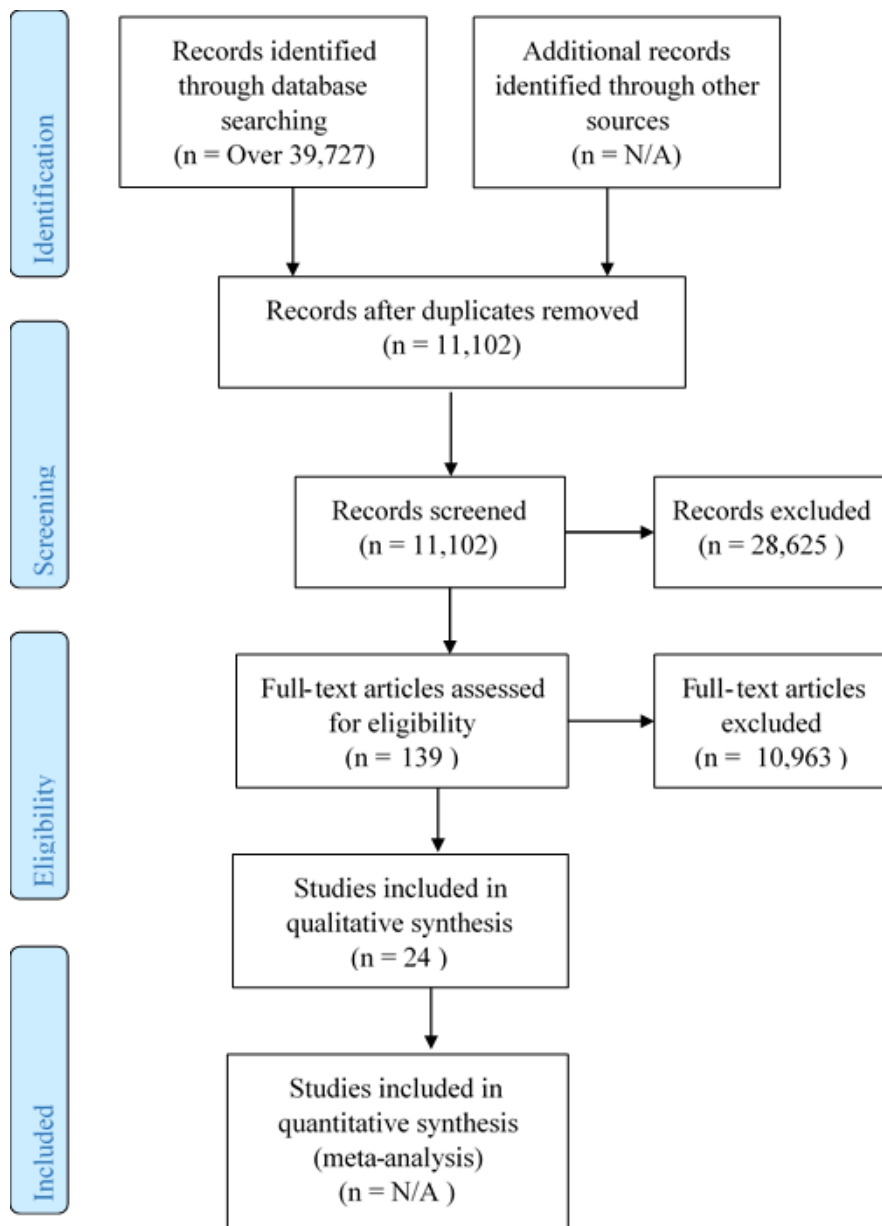


Figure 06: PRISMA Flow Diagram

Forensic Accounting Education

One of the key focus of the researches under the Forensic Accounting is, “Forensic Accounting Education”. The demand for forensic does not meet the supply of Forensic Accountants and the supply is lower than the demand. Total of five (05) studies were focused on the forensic accounting education.

A study which was focused on determining current views of educators and practitioners regarding forensic accounting education, found that the demand for forensic accounting will increase in the near future. Therefore, it is more preferable to offer a separate degree for forensic accounting at the undergraduate and post graduate level. The opinion of the forensic accounting practitioners is, it is more important to include topics outside to the traditional accounting in the forensic accounting curriculum (Kramer, et al., 2017).

One study focuses the relevance of big data to forensic accounting education and forensic accounting practice. Based on the results of the study the authors suggest that both forensic accounting and big data should be offered at both undergraduate and graduate level degree programs in accounting. Further, twenty-five (25) Big Data topics are suggested in this study to be integrated into forensic accounting education. This twenty-five (25) topics can be categorized in to “fundamentals of Big Data for forensic accounting”, “data analytics and techniques”, and “Big Data application in forensic accounting”. This study stresses on the integration of these topics in to forensic accounting education to enable the students to successfully prepare for their future professional career as some attributes and techniques of Big Data are important in improving forensic accounting education and practice (Rezaee & Wang, 2018).

In addition to the above, a study has been undertaken in the area of usefulness and effectiveness of various teaching methods in forensic accounting by Alshurafat, et al. (2020). This study highlights the importance of considering integrating the forensic accounting into the accounting curriculum. The results of this study suggest that using an experiential approach as a philosophy and signature for forensic accounting education. An experiential learning method is suggested in the forensic accounting education as this approach simulates real forensic accounting work in technical, theoretical and ethical dimensions (Alshurafat, et al., 2020).

Identifying the set of skills that a Forensic Accountant is needed to possess was the aim of another study in the selected sample. As per the results of the study, the forensic accounting encompasses knowledge about auditing, accounting, statistics, information technology (IT), legal rules and human skills. Therefore, forensic accounting is multidisciplinary. A Forensic Accountant needs to have skills in each of the above specified areas. Statistical knowledge helps the quick analysis of data when the data is large. In order to detect cybercrimes, proficiency in Information Communication Technology (IT) is essential. Human skills have an important role due to social engineering attacks. As forensic accounting is much related to legal issues, the knowledge in the area of law plays an important role within the forensic accounting profession (Tiwari & Debnath, 2017).

Similar to the above study another study was conducted on the knowledge requirement and task performance fraud risk assessment of Auditors and Forensic Accountants with regard to the fraud-related problem representation. The country based for this study was, Nigeria and the concentration was on the public sector. The findings of this study are interesting. As the research findings, both knowledge requirement and task performance fraud risk assessment have a positive relationship with fraud-related problem representation (Popoola, et al., 2015).

This study highlights the importance of having subject specific knowledge by a Forensic Accountant.

In conclusion, the need to integrate forensic accounting education at the undergraduate and graduate level has been identified by many academics. The Forensic Accountant should have skills in multidisciplinary areas and knowledge about traditional accounting alone cannot create a Forensic Accountant. Big data plays an important role within the character of Forensic Accountant. Therefore, relevant big data modules should essentially include into the curriculum of forensic accounting education. The studies which have been done in this area of forensic accounting is very less. Therefore, there is a gap in the research to analyze regarding developing a curriculum for the forensic accounting education.

Models incorporated in practicing Forensic Accounting

The second key area selected under forensic accounting is, Models incorporated in practicing Forensic Accounting. Out of twenty-four (24) studies in the sample, five (05) studies are under this key area. Basically, these studies are aimed at analyzing existing fraud prevention methods or introducing new fraud prevention methods that could be incorporated by a Forensic Accountant.

Two studies were aimed at fraud triangle. One study is aimed at developing another method as an alternative for fraud triangle. This study proposes the application of Crime Triangle of Routine Activity Theory to fraud events as a complement to the University accepted fraud triangle. The University accepted fraud triangle refers to the key three factors of opportunity, pressure and rationalization. The findings of this study conclude that Crime Triangle complements the Fraud Triangle's perpetrator centric focus. This is achieved by the way of examining the environment that the fraud occurs and the relevant parties who play a role in preventing fraud or not playing their role and therefore, allow the occurrence of fraud. Further, this study suggests that application of both of these triangles to a fraud event provides a comprehensive view of the fraud event (Mui & Mailley, 2015). In addition, the other study suggests that the researches should focus on the areas of; rationalization of fraudulent behaviors by offenders, the nature of collusion in fraud, and regulatory attempts to promote whistleblowing. This suggestion was made, after analyzing the fraud triangle and thereby identifying new directions (Free, 2015).

While certain studies are aimed at introducing new methods which could be incorporated into the field of forensic accounting to investigate on frauds, some studies are focused on analyzing the existing methods. One of the studies has analyzed the evolution of methods involved in forensic accounting with the technology. This study suggests that improvements need to be made in regard to interviewing and interrogation methods, handwriting analysis and data analytics (Louwers, 2015).

Further to above, a generic investigation process to be followed by the commercial forensic accounting practitioners was critically analyzed in one of the studies. The base country was South Africa. As per the results of this study the most important reason for implementing a formalized investigation process is, reputational risks and quality control of investigative work. This study explains that the investigation process has seven (07) steps as gather evidence, interrogate and examine the financial evidence, develop computer applications that help in analyzing and presenting the evidence, putting forward all the findings in the form of reports, exhibits and documents and finally taking part in civil actions or litigation as an expert witness, and testifying to the court and presenting all the evidence obtained through documentation or visual aids (Nortje & Bredenkamp, 2020).

A study which focuses on developing a plan that Forensic Accountants can use to investigate financial frauds (Lokanan, 2019). As per the results of this study, in order to avoid injustice in the courts, the concealment and conversion gathering techniques can be incorporated. These techniques provide fodder on gathering and triangulating direct and circumstantial evidence.

The focus of most of the studies under this category is, fraud triangle. Only one study has been conducted with the aim of developing a new model which can be incorporated in the fraud investigations. Further, there could be new methodologies used by forensic accounting practitioners, where less attention has been paid for the identification of same. This can be identified as a gap in the forensic accounting literature. More studies have to be conducted in this area as the practitioners can obtain more insights regarding the methodologies available for the conduct of forensic accounting.

Practical implementation of Forensic Accounting

The next key focus area is the studies in practical implementation of forensic accounting. The studies in the selected sample under this criterion have focused on different sub areas which have been analyzed below. The total number of studies which comes under this criterion is, nine (09).

One study which was conducted based on Asian Region found four (04) widely used methods used to do frauds which are; days' sales in receivable (DSRI), depreciation (DEPI), assets quality (AQI) and total accruals to total assets (TATA). Further, the financial shenanigans relating to revenue and expenses are commonly used by perpetrators in order to commit frauds (Hasan, et al., 2017).

Further, a positive relationship between fraud incidences in Nigerian Public Sector and the three factors of Fraud Triangle Theory (FTT) which are; opportunity, pressure and rationalization was found by, Abdullahi & Mansor (2018). The study was based on Nigerian Public Sector.

As per the results of a study when corporation are caught up in scandal, three strategies are being initially used to account for the actions which are; denial of wrongdoing, obfuscation or denial or responsibility. In order to investigate on the scandals, the corporations appoint external investigators who are Forensic Accountants. Finally, the corporate entities survive when the fraud is taken place but, not some of the individual members as the blame is on individuals who commit the frauds not on the corporation (Gottschalk & Benson, 2020).

A study has focused on a specific area where a less attention of Forensic Accountants has been made which is, Pharmaceutical drug counterfeiting. This has been identified as a fast-growing area of fraud (Rivest & Pacini, 2019). As per the literature, criminals collect around \$75bn annually in illegal sales from counterfeit drugs. Further, Pharmaceutical counterfeiting also leads to the loss of lives when criminals use lethal chemicals in the manufacturing of fake medicines. This study suggests strategies to discover this early by using reliable tracking technologies and inventory management controls in the supply chain, conducting effective regulatory and legitimate customs inspections, and increasing consumer awareness of basic forensic accounting tools.

A study which focuses on the Human Trafficking which is a crime with enormous human cost concludes that anti trafficking public-private financial partnership can reduce this crime (Voorhout, 2020). Another study has focused on the external fraud examiners. There is a remarkable increase in the external fraud examiners who investigates on frauds (Gottschalk,

2017). As per the results of this study fraud examiners contributes more at the later stages in the criminal justice system.

Two studies have focused on Colonial New Jersey's Paper Money Regime. The period considered for one study was, from 1709 to 1775 (Grubb, 2015) and the other study was focused on period starting from 1775 to 1774 (Grubb, 2017). As per these two studies, forensic accounting is used to reconstruct the data on emissions, redemptions, and bills outstanding for Colonial New Jersey's paper money as it was difficult to identify the relationship between paper money in circulation, prices, and exchange rate in British North American Colonies using the conventional methods which led to the rise of colonial money puzzle. This highlights the importance of forensic accounting.

A study which was conducted based on United Kingdom concludes that the awareness of the Local Authorities regarding forensic accounting is doubtful. Therefore, implementation of case studies would be a successful method to increase the awareness regarding forensic accounting, enhance the anti-fraud capabilities and make informed decisions to successfully face the increasingly complex fraud challenges (Sahdan, et al., 2020).

The existence of positive relationship between forensic accounting and fraud triangle has been proved in the literature. However, more studies have to be conducted in the areas of fraud prevention mechanisms and the areas where the less attention of Forensic Accountants have been made.

Review articles on Forensic Accounting

The last key area which is used to analyze the selected sample of past studies is, the previous review articles which have been done in the area of forensic accounting. Within the selected sample, five (05) researches are review articles on Forensic accounting which have focused on different areas under the umbrella term "Forensic Accounting".

Based on the analysis of literature another study concludes that fraud is complicated, and therefore, the complexity of frauds has a significant effect on the empirical and non-empirical findings of researches which are based on forensic accounting (Ozili, 2020). Accordingly, the complexity of fraud has to be considered in the fraud investigations.

Further, another study suggests that there is no any universal image for the Accountants. Further, the recognition has to be provided within the accounting profession for practitioners such as Forensic Accountants as they are representative of strong accountant stereotype (Smith, 2017).

A review article which was conducted with the aim of identifying what constitute a good Forensic Accountant concludes that the question of what constitute a "good" Forensic Accountant had not been investigated before. As the forensic accounting is multi-disciplinary and it is highly technical, the Forensic Accountants have a significant risk of conflating ethics with compliance with the law. Further, this study also suggests that an understanding of virtue ethics and especially the practical wisdom will help Forensic Accountants to maintain public confidence and quality in the services provide by them and provide practical guidance when exercising professional judgement (Howieson, 2018).

The, final research article under this category has been focused on identifying the gaps in the forensic accounting literature, identifying most commonly used research models in forensic accounting researches and identify research methods that have not been frequently used. The results of this study suggest most of the studies have been done in the area of frauds and most commonly used methods are, quantitative methods.

According to, Botes & Saadeh (2018), the term Forensic Accounting is not defined properly. Therefore, a study was performed to develop an explanation for the term forensic accounting by gathering evidence on the prevalence of the term in the Southern Hemisphere by referring to literature on forensic accounting. Accordingly, this study suggests the definition of; “The application of financial expertise, investigative skills and legal knowledge to undertake fraud examinations, advisory services, disputes and other reviews, the result of which could lead to a court of law appearance” for Forensic Accounting.

As per the results of this study, there is a strong focus on the role of Forensic Accountant in the prevention of frauds. Further, an increased reliance was found on the websites in searching for forensic accounting information rather on academic literature. Future developments with regard to the term Forensic Accounting to be done in the areas of; location dominance, lack of academic rigor in publications; and the multidisciplinary nature of Forensic Accounting.

Conclusion and Recommendation

As per the results of systematic literature review which has been performed over the period starting from 2015 to 2020, several important conclusions can be made. Firstly, it is important to incorporate forensic accounting into the education at undergraduate and graduate level. A very few Sri Lankan Universities and Accounting Professional bodies have identified this requirement. The supply of forensic accounting is not met by the demand for Forensic Accountants due to this reason. Therefore, the attention of Sri Lankan University system should be paid to this area.

Further, knowledge on traditional accounting practices alone does not create an ideal Forensic Accountant. A Forensic Accountant should have knowledge in multi-disciplinary areas. These multi-disciplinary areas include; auditing, accounting, statistics, information technology, legal rules and human skills. Moreover, modules on big data should be included to the curriculum of forensic accounting education as good Forensic Accountant essentially needs the knowledge on big data.

The focus of most of the studies is, practical aspects of forensic accounting. While this can be identified as good trend more concentration should be frauds where less attention of Forensic Accountants has been paid to other areas such as pharmaceutical drug counterfeiting.

Further, in four (04) areas of forensic accounting, a less number of studies have been conducted. The identified four (04) areas are; forensic accounting education, forensic accounting and financial collapses, forensic accounting application in the real world, and forensic accounting and auditing.

The studies which would carry out in the above areas will essentially help creating forensic accounts to meet the demand in the industry while the practitioners could enhance their knowledge on forensic accounting.

Based on the systematic review of the literature, three (03) recommendations can be provided. The first recommendation is forensic accounting education should be introduced at the undergraduate or graduate level of education. The second one is, the curriculum of the forensic accounting education should be designed in such a way which has the ability to create a Forensic Accountant who has skills in multidisciplinary areas. The third and final recommendation is, future researches could be performed in the areas of; importance of forensic accounting education, how forensic accounting could be used to reduce financial collapses, practical application of forensic accounting and; the role of Forensic Accountant in the field of auditing.

There are several limitations of this study. Firstly, this study does not cover the whole population of studies which have been done in the area of forensic accounting. The authors considered only the journal articles which have been published during the period of 2015 to 2020. There can be case studies, book sections, and conference publication of forensic accounting which have not been covered in this study. Further, the authors only considered the articles published in four (04) recognized global electronic data bases. There are studies which have been done in forensic accounting but not published in any of the considered electronic databases. Such studies have not been covered under the current study.

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The Determinants that Affect the Disposition Bias of Individual Investors in Sri Lankan Colombo Stock Exchange (CSE)

Buddhika, H. J. R.¹

Traditional Finance theory presumed that equity market participants take decisions based on rational platforms. However, recent market incidents witnessed investors' decision-making process is fueled with irrational investor behaviors. Disposition bias is a dominated and significant bias which investors are more prone to sell the winning stock and tend to hold on to the loss-making stocks. Numerous studies can be identified in disposition bias literature in developed markets in European zone. There are limited number of studies that can be found in line to Sri Lankan context. This study tries to give a victorious answer for the research questions "The relationship of determinants towards the disposition bias in individual investors in Sri Lankan stock exchange?" and "what is the magnitude and direction of the relationship between disposition bias and its determinants". The study is significant mainly on Colombo Stock Exchange (CSE) market serve as a key catalyst in the country's growth story. The CSE was ranked as the second-best performing equity market according to Bloomberg and the best performing exchange according to the world federation of Exchanges. There is a momentum need to continue for better performance and economic development. The irrational behaviors affect for the above said momentum and the study gives a comprehensive analysis on the causes of disposition bias which can be used to reduce the biases in future time. This study reflects investors in CSE purely look at the individual psychological aspect and their influence towards the investment decision making in CSE.

Keywords: *Bounded Rationality Theory, Colombo Stock Exchange, Disposition Bias, Prospect Theory*

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¹ Department of Finance, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka (buddhikar@kln.ac.lk)

Introduction

The tendency of investors to hold losing investments too long and sell winning investments too soon is recognized as the disposition bias in technical language. The traditional finance theories are built on the key assumption that investors are rational being with available information which in line with theory of Efficient Market Hypothesis (EMH) by (Fama, 1970). Behavior finance explains the insights of investor psychology pattern. The behavior finance can be explained as a field of finance which tend to explain the stock market anomalies using identified psychological biases (Fama, 1998). In literature of behavioral finance various types of biases are recognized, which includes; overconfidence, herding, loss aversion, self-attribution etc. The disposition bias has the considerable positive and negative influence on the investors decision making at CSE; empirically proved (Siraji and Buvanendra, 2019). The individual investors of CSE may place too much faith in their own forecasts that lead to bias in their actions. (Pathirawasam and Edirisinghe, 2011). It is noteworthy to study and understand the behavior of individual investors at CSE and the determinants influencing towards their decision.

The modern finance theoretical perspectives are described by (Miller, 1999), while the behavioral finance historical development is well explained by (Ritter, 2003); (Baker and Nofsinger, 2010); (Statman, 2014) and (Thaler, 2016). In psychological perspective, irrationality on the part of human decision is a basic human nature (Ellis, 1976).

The Bounded Rationality Theory suggests that the investors' decision making is not fully rational but it is bounded rational. It further reveals that the individuals are keen to make satisficing decisions rather than optimizing decisions. He suggested that economic agents use heuristics to make decisions rather than a strict rigid rule of optimization. They do this because of the complexity of the situation. (Simon, 1955). The theory was further advanced and it proved that the assessment of an alternative's outcome comes from individual personal judgement based on mental shortcuts namely; heuristic that govern the rationality. (Tversky and Kahneman, 1973,1974). These heuristics are simple and that let humans to make fast decisions in an uncertain situation. The theories described the rational and irrational behavior of the cognitive psychological perspective where it does not explain the cause and effects lead for the behavioral bias of disposition. The Cognitive Behavioral Therapy (CBT) of causation that provides an underlying model to understand the cause and effect of behavioral anomalies expressed by the investors in stock market (Beck, 1967). CBT is based on the main with 03 dimensions of idea that how we think (cognition/thought), how we feel (emotion/feelings) and how we act (behavior) all interact together. Specifically, our thoughts determine our feelings and our behavior. Through this model the root cause of human irrational behavior can be understood logically by this theory of causation which leads for disposition bias.

The disposition bias existence in the world equity markets were tested appropriately. The trading experiences, demographic characteristics and knowledge on the products are responsible for the variations of the disposition bias. (Dhar and Zhu, 2006). The long term investor decision making is significantly influenced by disposition bias. (Lakshmi et al., 2013). Behavioral biases have a significant impact on behavioral and contextual factors on investment performance of individual investors in the CSE (Menike, Dunusinghe and Ranasinghe, 2015). The studies pertaining to Sri Lanka is about to investigate on existence not to find the cause and effect. The research on behavioral finance article of Sri Lanka, proves that disposition bias is existing in Colombo Stock Exchange where it affects positively and negatively for the decisions of the individual investors (Siraji and Buvanendra, 2019). The disposition bias and their antecedent's evaluations are found on limited articles pertaining to Sri Lankan context.

On Sri Lankan level there are little number of scholar articles that exhibit factors which contribute to disposition bias. The study mainly focuses on recognizing the variables which create relationship and the influence towards the disposition bias of the individual investors in Colombo Stock Exchange. Further it would find the magnitude and direction of the relationship between disposition bias and its determinants.

The Bounded Rationality Theory and Prospect Theory do not address the reasons behind the disposition bias existence. The theories prove the irrational behavior is existing among investors inner perception where the causes and the contribution are not emphasized in the literature.

The disposition bias is driven through three main headings of thoughts, feeling and behavior. Gender is recognized as the moderating factor where individual finance risk tolerance is based on (Harlow and Brown, 1990). The behavioral biases are varying from country to country (Pompian and Longo, 2008), and also dependent on investors' gender (Kalra et al., 2012); and (Phan and Zhou, 2014). However, there is no clear published research on the moderating role of gender through disposition bias and their influence on stock investment decision making in the context of emerging market of Sri Lanka. Therefore, the research paper studies and tests the influence of cognitive factors on individual investor's stock investment decision and the moderating role of gender towards disposition bias relationships in Sri Lankan perspective.

The study gives a guide to individual investors about the psychological cognitive drivers which involves in disposition bias in investment decisions and to guide for better unbiased investment decisions. The rest of the papers structured as follows. The second section explains and reviews about the topic with the previous scholarly articles. It explains how bounded rationality theory, prospect theory and the cognitive behavioral theory are embedded to fill the theoretical gap of interpret causes towards the disposition bias. The third section explains about the conceptual framework and finally review methodologies and conclusion respectively. The paper concludes with a brief discussion of the theoretical, practical and research implications of this conceptual model.

Literature Review

The disposition bias may affect and contribute to the price stability in the market. (Odean, 1998). The findings reveal that the individual investors exhibit disposition bias; that is, they realize their profitable stocks investments at a much higher rate than their unprofitable ones, except in December. The paper concluded individual investors demonstrate a significant preference for selling winners and holding losers, except in December when tax motivated selling prevails. The 10,000 stockbroker accounts investigated for this research throughout the period 1988 to 1993. The research does not address variables which lead of disposition but reflect the post impacts on that.

The prospect theory is the advanced modification for the expected utility theory. The expected utility theory assumes that the investor decides in between risky assets by comparing the utility value weight. The prospect theory explained the utility of return is based on the potential value of loss and gain rather than the final outcomes and investors where apply heuristics while making investment decisions. (Kahneman and Tversky, 1979).

The main reason and the expectation of the humans are aversion to loss realization. Due to that reason investors keep continuously their stocks while the prices are reducing. The expectation which it leads is the price which will rise in next day. (Shefrin and Statman, 1985). The findings proved the disposition bias (Shefrin & Statman, 1985) is not a laboratory

experiments but shows up in real world financial markets. The main fact is the causes are not identified but the implications were monitored closely from the research.

The existence of disposition bias in a market may have different implications over the performance of that market. One of the main implications is the price reversal of loser and winning stocks due to the buying and selling pressures caused on those two stocks respectively (Bandara, 2012). The research is conducted on Colombo Stock Exchange (CSE) over the period 2006 to 2010 with 20 stocks. Secondary data used and scholar concluded that unobservable factors (firm specific and time specific factors) effect for the changes of individual investor behaviors such as disposition bias. The findings conclude that there is a disposition bias but the reasons and causes are not justified as per the previous mentioned articles.

The entrepreneurs are highly affected and influenced by the feeling of the investors (Brundin and Gustafsson, 2013). They have found that emotional reactions of the investors are basis for their various decision making. Their experiment was based on 101 entrepreneurs by giving them to take 3,232 investment decisions. The independent variable considered were the experience, emotions and the dependent variable considered was the propensity to allocate their investments into various decisions. However, the uncertainty is considered as the moderating variable on the investment decision. The final results stated that the entrepreneurs are more willing to continue their investments if they experience positive emotions. Further they revealed the negative emotions tend to reduce the inclination of entrepreneurs to invest.

The research finds and attempts to bridge the gap of the differences in terms of geographical location and demographic profile between Malaysia and other countries by examining the impact of the psychological factors on investors' decision making in the Malaysian stock market. (Bakar and Yi, 2016). The final remarks said there was a significant impact created by behavioral biases towards investment decision making where herding bias act in a neutral way. Another important finding says that psychological factors depend on individual gender. The findings are further in line with previous research findings and no significant contradictions. 200 individual investors were selected for the research between the ages 18-60 years. This further proves rational investors are actually less in financial markets where they response based on their psychological status and other elements.

The research provides the evidences that among the behavioral factors, anchoring, disposition bias, over confidence and risk perception have the considerable either positive or negative influence on the investors' investment decision making at CSE. (Siraji and Buvanendra, 2019). Further they identified and explained that gender representing as a moderation effect on the relationship between behavioral factors. This is also in line with previous research findings and results. However, the main point is the reasons which drives the disposition effect which is not comprehensively address.

Conceptual Framework

Emotions/ Feelings

Emotions/Feelings in stock trading and investment decisions have been attracted in academic research. Emotions can be explained as a state of arousal activated by expectations about something (Elster, 1998). The study is mainly focused on the emotions evoked by expectations about the stock returns pertaining to stock market. The emotions will lead investors to make decisions in an irrational pattern. This might further lead for the misattribution bias and incorrectly attribute their current mood to the financial decision. (Nofsinger and Kim, 2008). This paper studies about how emotion lead for the disposition bias for the stock market

decision making of individual investors in Colombo Stock Exchange. Emotions play an important role in stock decision making; while gaining of the selling stocks induces positive emotions of excitement and precious, losing of the selling stocks elicits negative feeling of pain and distress. (Strahilevitz et al., 2011). The above findings support the notion that investment decisions are influenced by emotions where a leading driver to be study in Colombo Stock Exchange as well. The hypothesis developed based on that.

H1 – There is no positive influence from emotions towards the disposition bias of individual investment decisions.

Behavior/ Experience

The investment decisions are highly influenced by the previous investment decisions or experiences pertaining to the stock market (Strahilevitz et al., 2011). Investor preference is to repurchase the stocks they sold for a higher gain rather than sell for a loss. Those studies further elaborate how the irrational decision making is led by the behaviors of the individual investors. The spillover effect expects that the investor transfers, the negative or positive experiences with the behavior towards the company (Bagozzi, 1996). The attitude is the better chances of finding a substantial correlation with behavior if behavior is defining as a specific act (Ajzen and Fishbein, 1980). Another argument and question is that benefit of knowledge is concerning behavior while behavior changes over the period of time, there is a popular statement that “past behavior is the best predictor of future behavior” (Ajzen, 1991). These reflection ideas are lead to test how investor behavior/experience impact towards the disposition bias of the individual investors in Colombo Stock Exchange. The following hypothesis is developed based on above said arguments.

H2 – There is no positive influence from investor behavior; derived from experiences towards the disposition bias of individual investment decisions.

Thought

The term “critical or reflective thinking” refer to a thought that reflects on the constraints and limits of what it can learn, depending on the language and the cognitive process adopted. It was named as critical (reflective) investment decision maker as that decision maker is the one who, through the constructivist perspective, achieves a greater understanding of his own decision making process (Massironi and Guicciardi, 2011). The Thought is an essential part of every cognitive process. It allows people to engage in decision-making, problem solving, and higher reasoning. This is derived through knowledge as well. The developed hypothesis is given below.

H3 – There is no positive influence from investor thoughts towards the disposition bias of individual investment decisions.

Gender

The group of both male and female investors are given a more rational performance in decision making once acted and behave separately. Once the female investors worked isolate and acted in overconfidence. However, when the both groups work together, that tend to reduce the overconfidence and lead for a better investment decision. The decisions are rational once they are taken in group basis. (Bogan et al., 2013). A study says biological and psychological traits would impact for the influence of the formation of preferences and investment decision making (Harlow & Brown, 1990). They have revealed that various components of the complex human neurochemical system influence the individual investors financial risk tolerance. The brain states and internally produce biological chemicals that could explain the investors’ irrational behavior which leads for mispricing and inefficiency in stock markets

(Murphy, 2012). It sufficiently proves that the gender difference impact and influence for the irrational behavior of investors. The females who have taken investment decisions are less consistent compared to make investment decisions and finally they go ahead with less risky alternatives (Glenzeret al.,2014). The sufficient literature provides that gender play a significant role and influence on investor decision making. The information proved that the processing styles of both the male and female genders are different from each other. The conclusion generalized that risk-taking capabilities and confidence level of female investors are lower than the male investors. Based on the past findings the gender is considered as moderating factor towards the disposition bias of the individual investors in Colombo Stock Exchange. The hypothesis build as follows.

H4 – There is no moderating effect from gender towards the disposition bias of individual investment decisions

The main four hypotheses are explained based on four main variables. The variables affect and influence towards disposition bias of individual investors of Colombo Stock Exchange. The conceptual framework is explained below.

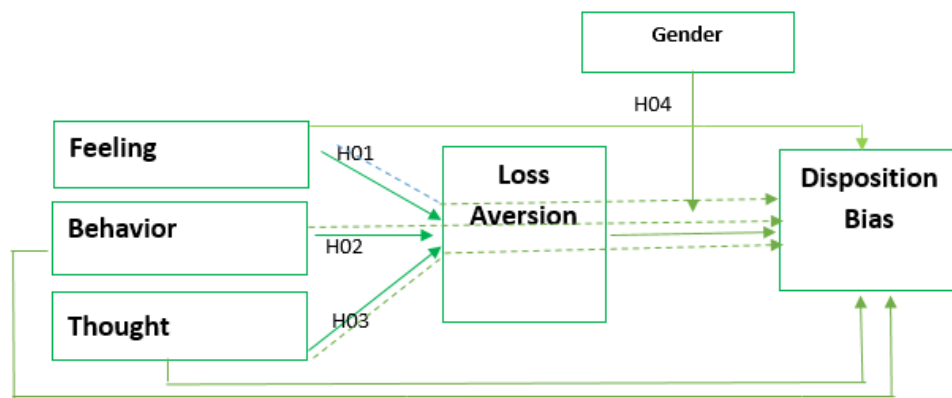


Figure 01 (Conceptual Framework)

The figure 01 was developed based on three theories; Bounded Rationality, Prospect Theory and Cognitive Behavioral Model. The overall model consisted with eleven hypotheses which only discussed the key variables and their hypothesis. The Cognitive Behavioral Model (Beck, 1967) explained the three main causes for the disposition bias, recognized as thought, feeling and behavior. The feeling is in line with emotions; behavior in line with experiences and knowledge in line with thought. The three antecedents lead for loss aversion where the assessment of an alternative's outcome comes from individual personal judgement to reduce the portfolio loss as much as possible (Tversky and Kahneman, 1973,1974). The loss aversion is recognized as the mediating variable which is derived from prospect theory (Tversky and Kahneman, 1979). The model is more similar to the theory of mind; which describes about human thinking is two ways of cognitive (knowledge, beliefs and intentions) and affective (emotions, feelings and mood) (Akel and Tsoory, 2011). This is the significant point that investors turn into the irrational behavior pattern and lead towards disposition bias. The gender is considered as moderating effect in the model where the evidence gives that the new view of financial markets functioning from a biological perspective. (Farmer and Lo, 1999). The same concept is developed (by Siraji and Buvanendra, 2019) on the gender and it plays a moderating role in the Colombo Stock Exchange. The result empirically proved that

disposition bias; tendency of selling winners too early and riding losers too long (Shefrin and Statman, 1985) exist in the Colombo Stock Exchange (CSE).

The Bounded Rationality Theory and Prospect Theory cannot explain alone the cause and effect of irrational behavior of disposition bias. The cognitive behavioral model was developed and link cause and effect model for the Prospect Theory and Bounded Rationality Theory. The loss aversion of Prospect Theory represented as mediating variable while gender is recognized as moderating the irrational behavior of the individual investor behavior and decision making.

Methodology

The methodology is describing the population, sample and techniques which are used for the evidence evaluation. This access for the individual investors and getting the responses will be challenging in the methodology. The sample selection is based on past literature and their methodologies. The customer accounts are select on random basis. (Odean, 1998). The 122 investment advisor candidates were selected for the evaluation of the findings. (Ofir and Wiener, 2009). The 97 students of the Finland University were tested for the disposition bias findings. (Aspara and Hoffman, 2015).

The data were collected during the second half of the 2020 through minimum 300 of self-administrated questionnaires (printed) from individual investors trading on Colombo Stock Exchange (CSE). The collection of data will process through stock broker firms in Sri Lanka. The research is based on qualitative model and the answers going to evaluate and convert into quantitative model for evaluation purpose. The questionnaire will address each variable comprehensively and will use the standard questions. The final responses received through the questionnaires will be analyzed using SPSS statistical and the SPSS AMOS.

Conclusion

This study contributes to the existing knowledge regarding the antecedents of the disposition bias (sell winners too early and ride losers too long) (Shefrin and Statman, 1985) of the individual investors in Colombo Stock Exchange (CSE). This study is directed for the evaluation and recognition of the psychological factors that lead for the irrational investor behavior. Those can be categorized based on cognitive and affective factors. The study strongly discusses about the cause and effects of the disposition bias where the lack of study area in Sri Lankan stock market context. The irrational behavior might lead for low performance of the stock exchange which directly contributes for the Sri Lankan economy. The findings will give more insights on the influential level of each variable towards the disposition bias of irrational behavior. Further the study helps for the individual investors of the Sri Lankan stock exchange to consider significantly regarding the factors recognized in above which lead for disposition bias. This will tend to reduce the disposition bias among individual investors in Sri Lankan market and lead for a massive performance in market growth as well. The study focused on psychological background of the individual investor where the further study can be extended into the social factors and their implications towards the irrational behavior of disposition bias.

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Impact of Political Events on Stock Market Return: Empirical Evidence from Sri Lanka

Kumara, H. V. U. D.¹ and Fernando, P. N. D.²

The purpose of this study was to investigate the impact of uncertain political events on the daily index return on the Colombo Stock Exchange (CSE) from 1st May 2009 to 29th March 2018 and to address the paucity of knowledge related to the political events in emerging stock markets. Fifteen major political events were selected from the study period and compared its impact for 2, 7, 15, and 30 days, pre and post-event period using the mean-adjusted return model. The findings of this study answered two problems. First, the impact of the events on the All Share Price Index (ASPI) return. Second, the way that ASPI fluctuates in response to the political events. Calculated average abnormal return and t-test results confirmed that political events have an impact on the market index, either significantly or insignificantly. Further, findings revealed that investors overreact to good political news while under-react to bad political news. But directions of the impact on the study subject depends on the constitution of the event and its market friendliness. CSE is inefficient in capturing the impact of an event in the short run but comes to its original state within 30 days of the post event period. This study will help investors to predict the market and scholars, listed companies, government bodies and other interested parties to reinforce the knowledge.

Keywords: *Colombo Stock Exchange, Event Study, Political Event, Sri Lanka*

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¹ Faculty of Graduate Studies, University of Kelaniya, Sri Lanka. (udayangadk@gmail.com)

² Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka.

Introduction

Impact of the political events highly affect the financial sectors including the stock market of a country. In Sri Lanka, the stock market plays a vital role for the development of the financial perspective of the country. It enhances the connection between domestic, foreign investors and listed companies and allow investors to earn profit while developing the economy of Sri Lanka (CSE, 2018). Though there are many stock exchanges in the world it is difficult to understand the behavior of any stock market. Therefore, event study methodology which explains the behavior of market indices with different kinds of events is used to understand its relationship.

Literature supports that many macroeconomic and microeconomic elements have an impact on the change of performance of any stock market for short term periods based on information dissemination efficiency of a market. In 1970 Efficient Market Hypothesis (EMH) was introduced and it explains that the price of a stock contains all the relevant information including historical information, publically available information and also internal information (Fama, 1970). Though many studies have researched on the impact of different sources of information on the stock market, how the market reacts to different political events is still questionable. Does market react to every political event? Is there any pattern of reaction? These questions will be addressed when studying the political events.

Literature confirms that political events affect the market either positively, negatively or as a neutral factor (Gurloveleen & Bhatia, 2015). It was found that some markets are more sensitive than other markets at international level, specially the emerging markets (Ahmed, 2017). Brown and Warner (1985) analyzed the US stock market for hypothetical events using the daily stock return to identify the abnormal return around the event date. Moreover Pakistani stock market was studied by Masood & Sergi (2008), Maik (2009), Mahmood et al. (2014), Nazir et al. (2014) using political and economic events and found a significant relationship with stock market return. Chiu, Chen, & Tang (2005) conducted a study to see the impact of elections on the Korean Stock exchange and found that elections had a greater impact on performance of the stock market. In Sri Lanka Attapattu and Gunarathne (2013) analyzed the Colombo Stock Exchange (CSE) with the parliamentary and presidential elections. All these studies found fluctuation in stock return around the date of events and concluded that study of such events gives a big insight in predicting the market and reducing the investment risk.

Though there are plenty of studies on empirical events in the world, there is a paucity of literature related to the studies on political events in the emerging stock markets like CSE. Therefore, the need for further research on efficiency and responsiveness of emerging markets on information disclosures has become most imperative. This study mainly focuses on the examination of the association between political events and market return in CSE and to understand the direction of volatility in market return with the categories of political news. To empirically investigate this phenomenon, researchers used daily All Share Price Index (ASPI) data of CSE from May 2009 to March of 2018. Ending of the war, election results, internal conflicts, government decisions and other political events were analyzed as selected event windows. This knowledge is helpful for investors and other stakeholders to identify, whether there is any impact on CSE by political events and arrange investment portfolios accordingly.

Literature Review

Researchers argue on the applicability of the theoretical knowledge in understanding the behavioral patterns of stock market. Although there is a dearth of theories which explain the relationship between political events and market return, one of the important hypothesis that

explains the above relationship to some extent is the Efficient Market Hypothesis. In this regard Harris and Spivey (1990) studied the crash on “Black Monday” (19th October, 1987) using S&P 500 index of USA. In the results there was a significant correlation between the percentage decline in stock prices on Black Monday and the stocks' historically estimated betas. Moreover, results supported the assumption of EMH. Another study was done on the Euro Crisis between 2009 and 2015 to identify whether financial markets fully display the characteristics associated with the EMH. Results discovered that there is considerable evidence of financial markets often performing in an efficient way during the crisis (Bird, Du, & Willett, 2017). Further, Aktas & Oncu, (2006) analyzed the Turkey market with the parliament rejection of a highly controversial bill that allowed the deployment of U.S troops in Turkey and found that, on the first trading day after the rejection of the motion, historical estimation of beta was highly significant. But the results did not show any clear sign for under reaction or overreaction of investors that violate the assumptions of EMH. Although the mentioned literature explained a relationship between EMH and Market return, a study which was done by Abeysekera (2001) to test the behaviour of stock prices on CSE with a weaker form of Efficient Market Hypothesis using daily, weekly and monthly CSE data from January 1991 to November 1996, found that the behaviour of CSE was not consistent with the above theory.

On the empirical aspect, literature explains how important the event study methodologies are when attempting to understand the behavior of financial markets. Fama, Fisher, Jensen and Roll (1969) first introduced the event study methodology and showed its usefulness for the studying of security price fluctuations. Brown and Warner in 1985 studied how daily stock returns of 50 securities changed with the events. Their attempts of the study were, estimating the variance in hypothesis testing concerning the mean excess return and they tried to investigate the issues with the daily stock return including the non-normality of return. To observe the hypothesis, the author has analyzed daily stock return of each security for a period of 250 days. Event date was generated hypothetically assuming that the events occurred with equal probability and market model was used to calculate the abnormal return. The results revealed that the non-normality of daily return does not show impact on event study techniques.

Many studies have been carried out on the stock market to study the impact of election. To identify such impact on South Korea's financial market, Chiu et al. (2005) analyzed foreign investor's trading behavior around the time period of the political election. The study was based on the Korean Stock Exchange data. Researchers collected data from KOSPI 200 index which is an underline stock index for trading futures and options contracts and data was gathered for a period starting from November 1997 to June 2004. GARCH (1.1) model was used to identify the relationship between independent and dependent variables. Results revealed that there is a significant decrease in trading of option contracts which are traded by foreign investors during the election periods due to the financial uncertainty.

In Sri Lanka Attapattu and Gunarathne (2013) undertook a study to examine the impact of parliamentary and presidential election on the stock market return. The purpose of their study was to identify any predictable pattern of return around the announcement of election and release of its results. Authors used the market model to identify any abnormal return in CSE. Findings revealed that if the announcement was made under the United National Party (UNP) dominant government, the market created a negative return. On the other hand, if the election announcement was made under the Sri Lanka Freedom Party (SLFP) dominant government, market created a positive abnormal return. If a 'market friendly' government won, the market will generate positive results. Further, Jayasinghe (2014) had examined the CSE for both presidential and parliamentary elections. They used the univariate GARCH model for the

analysis and the study was conducted from January 1985 to September 2009. Confirming the previous study results, the author found an upward movement of volatility of return around the elections. Moreover, results showed that the degree of volatility of return increases when closer to the election date.

Fernando and Piyananda (2015) studied about the stock market performance under different presidential terms. The study focused on ASPI, market turnover, market capitalization, turnover ratio, and average market return under different presidential terms. The total sample period was covered from 1994 to 2014 and it was divided into four main presidential terms. Results of the study revealed that the presidential time period II (from 1999 – 2005) performed better than the other presidential terms. Further, it confirmed the relationship between political events and stock market returns.

‘War’ is considered as another political event which highly affects the financial market performance. Frey & Waldenstrom (2004) carried out a study to examine the impact of World War II on Zurich and Stockholm bond markets. They followed the event study methodology to analyze the data and results of the study illustrated that the financial markets function well even during a major war, though there were several price reactions. Another study was done on the Israel stock market to examine the impact of the announcement of news related to the peace process, which revealed the importance of peace for the development of the financial market. The study explained major political events in Israel from 1993 to 1997 and their impacts. Findings revealed that returns of the stock exchange following political events are more extreme than days that do not have political events (Zach, 2003).

Karime and Sayilir (2019) analyzed Turkish stock market for good and bad political news. Data from January 2008 to December 2017 were analyzed using the symmetric and asymmetric GARCH model. The results of the study revealed that there is significant impact on market return by political news. Also found that both good and bad political news affect on volatility of return and this direction is time varying.

Methodology

Research design

This study has mainly focused on major political events which took place from 1st May 2009 to 29th March 2018, in order to understand its’ impact. ASPI index data was gathered through CSE library CD for the respective period. In the literature, intensity of the events was measured by examining its importance in the front page of leading newspapers (Nazir et al. 2014). Nevertheless, this study which followed the same methodology, identified the events by examining the front page of Lankadeepa, Dinamina, Daily News and Sunday Observer for the selected time frame and captured highlighted political news. To minimize any biases, authors tried to include events that occurred within a wide range of days. Nazir et al. (2014), Yeung and Aman (2016) used the day, following the day the event took place as the ‘event date’. Hence, the event date was decided as the day, following the day that the respective event took place. Table III.I shows the selected political events with the respective event dates.

Table 1: Selected political events from May 2009 to March 2018

No	Event date	Event description
1	18 May 2009	End of the Civil War in Sri Lanka
2	26 January 2010	6th Presidential Election, 2010
3	08 April 2010	General Election, 2010
4	30 May 2011	Katunayake Free Trade Zone strike
5	25 August 2011	Removal of State of Emergency
6	08 November 2011	Revival of Underperforming Enterprises and Underutilized Assets Act
7	15-17 November 2013	Commonwealth Heads of Government Meeting (CHOGM), 2013
8	15 June 2014	Ethnic tension in Dharga Town, Aluthgama
9	08 January 2015	7th Presidential Election, 2015
10	04,05 March 2015	Maththala International Airport shutdown and Port city project suspension
11	20 November 2015	Budget was presented to the Parliament, 2015
12	28 October 2016	COPE Report released on Treasury Bond issue
13	03 February 2017	Right of Information act comes into effect
14	07 September 2017	Introduction of the New income tax structure
15	02 March 2018	Conflict in Theldeniya and State of Emergency declared for 10 days

Event Window and Estimation Period

When referring to the literature it was an empirical issue to select the event window for the analysis. A window that is too long will absorb noisy information which do not pertain to the study. A window that is too short will not be able to analyze the effect of an event (Nazir et al., 2014). Malik (2009) examined the impact of President Pervaiz Musharraf's resignation on the stocks returns and volume of KSE 100 index by using six months before and after, as an event window. Campbell, Fifiield, and Ohuocha (2011) had selected the event period of 31 days from -15 to +15 to see the impact of the stock dividend announcement. Since the Sri Lankan stock market is still an emerging stock market and since the political and economic situation in the country is frequently fluctuating, it is very difficult to see the impact with a short event window. But long event windows will give a contaminated result. To avoid these issues authors have selected event windows of 2 and 7 days respectively, as pre and post event period to see the short-term effect on CSE and 15 days and 30 days respectively, as pre and post event period to analyze the market efficiency to absorb the uncertain information.

Estimation period is the time interval used to calculate the expected return of the stock market. Different researchers used several estimation periods to calculate the expected return. Most of them consist of 100 days, 120 days, 180 days, and 200 days (Ahmed, 2017; Attapattu & Gunaratne, 2013; Campbell et al., 2011; Malik, 2009; Nazir et al., 2014; Yeung & Aman, 2016). To estimate the expected return in this study, authors used an estimation period comprising of 200 days, measured from day -230 prior to the event date to -31 prior to the event date. Figure 01 shows the graphical representation of Estimation period, Pre and Post event period.

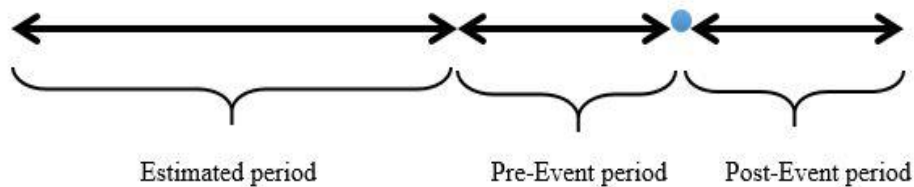


Figure 01: Graphical representation of Estimation period, Pre and Post event period.

Analytical Techniques

This study follows the event study methodologies used by Brown and Warner (1985) and followed by Campbell et al. (2011), Attapattu and Gunaratne (2013), Nazir et al. (2014) and Yeung and Aman (2016) to measure the impact of events on the security market in Sri Lanka. To identify the impact of events on CSE as a whole market, Mean-adjusted return model was used. To identify the direction of impact, the author evaluated the pre and post abnormal return around the event date. Out of the selected 15 events authors identified 5 events as positive and 4 events as negative. 6 events failed to be categorized as good or bad due to fact that they show both good and bad influence. Table III.II show the categorization of political events.

Table 2: Categorization of events

Category	Event description
Good Event	End of Civil War in Sri Lanka
	Removal of State of Emergency
	Commonwealth Heads of Government Meeting (CHOGM), 2013
	Right of Information act comes into effect
	Introduction of the new income tax structure
Bad Event	Katunayake Free Trade Zone strike
	Ethnic tension in Dharga Town, Aluthgama
	COPE Report released on Treasury Bond issue
	Conflict in Theldeniya and State of Emergency declared for 10 days
Uncategorized Event	6th Presidential Election, 2010
	General Election, 2010
	Revival of Underperforming Enterprises and Underutilized Assets Act
	7th Presidential Election, 2015
	Maththala International Airport shutdown and Port city project suspension
	Budget was presented to the Parliament, 2015

Mean-Adjusted Return Model

It was found in literature that mean adjusted return model is an efficient model for the analysis of market indices (Nazir et al., 2014). Brown and Warner (1985), Nazir et al. (2014), Yeung and Aman (2016) and Ahmed (2017) used mean adjusted return model to analyze the political events with reference to the developing and emerging stock markets.

Daily stock return of the ASPI market index was calculated using the following equation.

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}} \quad (1)$$

Where R_{it} is the daily return of the stock index i at time t , P_{it} is the closing value of the stock index i at time t , and P_{it-1} is the closing value of the stock index i at time $t-1$. Expected return was calculated using the following equation.

$$R^* = \left(\frac{1}{T}\right) \sum_{t=1}^T R_t \quad (2)$$

Where R^* represents the expected return, T is the number of days in the estimated period and R_t denotes the market index return on day t .

In order to test the market reaction to the event, abnormal return was calculated at the time of the event and before and after the event.

$$AR_t = R_t - R^* \quad (3)$$

Where AR_t is the abnormal return of market index i at day t in the event window, R_t is the return of the market index on day t of the event window, and R^* the expected return which was calculated from equation “2”.

Followed by calculated the cumulative pre-event abnormal return and post-event abnormal return for market for the selected event windows of day 2, day 7, day 15 and day 30 using the following equations.

Pre-event abnormal return,

$$AR_{before}^* = \frac{\sum_{t=-k}^{t=-1} AR_{before,t}}{n} \quad (4)$$

Where k and n are the number of days taken before the event day, AR_{before}^* is the average abnormal return before the event date.

Post-event abnormal return,

$$AR_{after}^* = \frac{\sum_{t=1}^{t=k} AR_{after,t}}{n} \quad (5)$$

Where k and n are the number of days taken after the event day, AR_{after}^* is the average abnormal return after the event.

To find out the impact of event, author has compared the pre-event abnormal return with the post-event abnormal return. If the difference is positive, the respective event has a positive impact on the stock market. If the difference is negative, then the respective event has a negative impact on stock market. To statistically prove the result, paired sample t-test was applied which was recommended by Menike and Man (2013), Nazir et al. (2014), Ahmed (2017) and many researchers in event study history.

For the calculation of p-value, the standard deviation of the pre and post abnormal return was first calculated.

$$\sigma_{before} = \sqrt{\frac{\sum_{t=-k}^{t=-1} (AR_{before,t} - AR_{before,t}^*)^2}{n-1}} \quad (6)$$

And:

$$\sigma_{after} = \sqrt{\frac{\sum_{t=k}^{t=1} (AR_{after,t} - AR_{after,t}^*)^2}{n-1}} \quad (7)$$

Here σ represents the standard deviation of the abnormal return.

Moreover, pooled standard error which is represented by the difference between the means of the two SD values were calculated as follows.

$$\sigma_{pre-post} = \sqrt{\left(\frac{(n_1-1)\sigma_1^2 + (n_2-1)\sigma_2^2}{n_1+n_2-1} \right) \left(\frac{1}{n_1} + \frac{1}{n_2} \right)} \quad (8)$$

Where, σ_1^2 is the variance of the pre event period and σ_2^2 is the variance of the post event period, n_1 , n_2 respectively, are the number of days in pre and post event period.

Finally, the pre-event and post-event abnormal return was calculated using the following equation.

$$t = \frac{AR_{after}^* - AR_{before}^*}{\sigma_{pre-post}} \quad (9)$$

Findings and discussion

In this study, the first research objective that needs to be addressed is, the identification of the association between political events and market return. Table IV.I shows the relevant p-values of market return in selected event windows. Further, table IV.II shows the average abnormal return of market values, before and after the events with the percentage changes.

Table 3: p-values of Market at event window 2, 7, 15 and 30 day

EVENT		<i>p-value</i>			
		2 Day	7 Day	15 Day	30 Day
1	End of Civil War in Sri Lanka	.580	.287	.916	.780
2	6th Presidential Election, 2010	.014**	.279	.986	.246
3	General Election, 2010	.161	.665	.268	.441
4	Katunayake Free Trade Zone strike	.301	.156	.012**	.024**
5	Removal of State of Emergency	.248	.663	.944	.506
6	Revival of Underperforming Enterprises and Underutilized Assets Act	.410	.472	.832	.816
7	Commonwealth Heads of Government Meeting (CHOGM), 2013	.928	.635	.493	.876
8	Ethnic tension in Dharga Town, Aluthgama	.601	.101	.418	.190
9	7th Presidential Election, 2015	.853	.142	.101	.691
10	Maththala International Airport shutdown and Port city project suspension	.994	.367	.109	.675
11	Budget was presented to the Parliament, 2015	.747	.393	.358	.377
12	COPE Report on Treasury Bond issue released	.032**	.782	.824	.687
13	Right of Information act come into effect	.700	.544	.661	.898
14	New income tax structure was introduced	.030**	.168	.049**	.000***
15	Conflict occurred in Theldeniya and State of Emergency declared for 10 days	.328	.873	.219	-

Note: ***, **, *Significance at 1, 5, and 10 percent, respectively

Table 4: Average Abnormal Return of Market

Event	Average Abnormal Return											
	2 day			7 day			15 day			30 day		
	Pre-return	Post-Return	Change of Return(%)	Pre-return	Post-Return	Change of Return(%)	Pre-return	Post-Return	Change of Return(%)	Pre-return	Post-Return	Change of Return(%)
1. End of Civil War in Sri Lanka	0.0120	0.0295	147%	0.0050	0.0144	186%	0.0068	0.0073	7%	0.0072	0.0082	13%
2. 6th Presidential Election, 2010	0.0021	0.0110	424%	-0.0020	0.0048	333%	0.0005	0.0004	-12%	0.0023	-0.0005	-122%
3. General Election, 2010	0.0130	-0.0017	-113%	0.0030	0.0012	-60%	-0.0026	0.0009	134%	-0.0025	-0.0012	52%
4. Kahunayake Free Trade Zone strike	-0.0017	-0.0080	-385%	-0.0006	-0.0066	-1090%	-0.0003	-0.0069	-2474%	-0.0021	-0.0063	-206%
5. Removal of State of Emergency	-0.0090	-0.0009	91%	-0.0011	0.0017	263%	-0.0006	-0.0004	39%	0.0001	-0.0015	-1202%
6. Revival of Underperforming Enterprises and Underutilized Assets Act	-0.0036	0.0009	124%	0.0014	-0.0041	-388%	-0.0018	-0.0024	-33%	-0.0019	-0.0026	-32%
7. Commonwealth Heads of Government Meeting (CHOGM), 2013	-0.0011	-0.0006	48%	-0.0026	-0.0019	25%	-0.0013	-0.0004	70%	0.0001	0.0002	246%
8. Ethnic tension in Dharga Town, Aluthigama	0.0034	0.0005	-85%	0.0011	-0.0007	-161%	0.0004	0.0014	210%	0.0008	0.0022	168%
9. 7th Presidential Election, 2015	0.0053	0.0038	-28%	0.0025	-0.0042	-263%	0.0010	-0.0034	-652%	-0.0007	-0.0016	-138%
10. Mathihala International Airport shutdown and Port city project suspension	-0.0058	-0.0058	1%	-0.0028	-0.0042	-52%	-0.0009	-0.0039	-341%	-0.0026	-0.0017	35%
11. Budget was presented to the Parliament, 2015	0.0032	-0.0004	-113%	-0.0005	-0.0031	-529%	-0.0006	-0.0020	-238%	-0.0002	-0.0011	-429%
12. COPE Report on Treasury Bond issue released	0.0004	-0.0015	-144%	0.0003	0.0007	153%	-0.0009	-0.0012	-28%	0.0001	-0.0003	-422%
13. Right of Information act come in to effect	0.0006	-0.0022	-491%	0.0001	0.0013	1040%	-0.0005	0.0002	135%	-0.0005	-0.0004	17%
14. New income tax structure was introduced	-0.0025	0.0007	126%	-0.0006	0.0009	242%	-0.0015	0.0006	140%	-0.0017	0.0009	153%
15. Conflict occurred in Theldeniya and State of Emergency declared for 10 days	-0.0010	-0.0022	-115%	-0.0007	-0.0004	38%	0.0000	-0.0015	-	-	-	-

Resulted *p*-values of the market did not show any statistically significant response to the conclusion of the civil war in Sri Lanka. But on the history of CSE from 2009 to 2019, the maximum daily returns of +6.46% was recorded on 18th of May when the war ended. Nevertheless, average abnormal returns after the event were recorded as positive on selected event windows. Based on the results it can be concluded that the ending of the civil war had a positive impact to the whole market.

In relation to the event of elections held in Sri Lanka, contrasting behaviors could be seen in relation to the market, presumably, owing to the election results. Findings represent that the market shows a significant positive movement with relation to the 6th Presidential Election results in a 2-day window. Positive abnormal return in market showed that results were favorably captured by the market. However, unlike the 6th Presidential Election, results of the 7th Presidential Election cast a negative shock on the market. Since the election results affected unfavorably, the average abnormal return after the 7th Presidential Election showed a negative movement of the market. With relation to the 2010 General Election results, a short period of abnormal return of market presented negative movement. But with time, the market absorbed the noisy information and the return became positive. Overall results of the elections showed that the election results cast a considerable impact on the market. But based on the present government and the market friendliness of the elected government, the direction of the market return can vary either positively or negatively.

On 25th of August 2011, the President announced the end of the State of Emergency with the ending of the civil war in Sri Lanka. Though results of the market do not show any significant fluctuations to the event, positive abnormal returns were observed in the market on the selected event windows of [2,2], [7,7] and [15,15] day. Surprisingly, a negative return was observed in the market in the 30-day post event period.

The shutdown of the Matthala International Airport and the suspension of the Port city project were done on the 4th March 2015 and 5th March 2015 respectively, as government decisions. The combined effect of the two events were analyzed and an insignificant movement was found in the market. In the first three windows, the market exhibited a negative return. On the 30-day window market showed a positive result with market having absorbed the noisy information.

Impact of the first budget under the National Unity Government in 2015 cast a negative fluctuation in all four event windows with insignificant results.

The results of the controversial bond issue which occurred in the Central bank of Sri Lanka, made a negative impact on the market. Market showed a significant negative movement in the short time window of [-2, +2] days. Though abnormal return at ± 7 -day window observed a positive return, in the long time windows there were insignificant negative returns.

Market abnormal return in the short event windows were negative in both the cases of Dharga Town incident and Kandy, Theldeniya incident which implies that ethnic conflicts were captured negatively by the market. But in long event windows the market absorbed the noisy information and return became positive.

The “Right of Information Act” came into effect on 3rd February 2017. Results did not show any significant movement on the market return. But showed a positive abnormal return on day 2, day 7 and day 15: post event period.

The results of the event of the introduction of the “New Inland Revenue Act” exhibited positive movement in all four event windows and significant at ± 2 day ± 15 days and ± 30 day event windows.

Katunayake Free Trade Zone protest was captured by the market negatively and found significant results in ± 15 day and ± 30 day windows. The movement of the market was negative in all four of the event windows.

There weren't any significant movement in the market following the cabinet decision of reacquiring the underperforming enterprises and underutilized assets. Overall movement of the market found was positive in the short event window $[-2, +2]$ and negative for the other selected event windows.

The 23rd Commonwealth Heads of Government Meeting was held in Colombo, Sri Lanka, from 15th to 17th November 2013. Market revealed a positive output on day 2, day 7, day 15 and day 30 post event windows. But results did not show any significant movement for the event.

Conclusion

T-test results and average abnormal return results of the study confirm that the political events have a considerable impact on CSE at market level, whether it is significant or not. Four out of 15 selected events have significant impacts on the market. Further, average abnormal return of the pre-event period was compared with the post-event period to find the effect and direction of the impact and found that positive news bore a positive impact on the market, while negative news had a negative impact. But the severity of each event had changed in each event window. Further, the impact of the neutral events on the study subject depended on the constitution of the event and its market friendliness. Moreover, the study found that CSE is inefficient to capture noisy information and it takes around 30 days to come to its original position. These findings are parallel with the previous literature carried out by Malik (2009), Attapattu and Gunaratne (2013), Nazir et al. (2014), Yeung and Aman (2016), and many other studies in the local and global context. Findings of the study will help the existing and potential investors, scholars, listed companies, government bodies and other interested parties to reinforce the knowledge.

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The Impact of Company Performance, Earnings Quality and Macroeconomic Variables on Foreign Portfolio Investment: Evidence from Sri Lanka

Wijesinghe, M. R. P.¹ and De Silva, A. L. C. M.²

The development flows signs renewed foreign interest in the stock market during mid-2017 recording an all-time high in foreign purchases. With the realization of investment opportunities and potential in capital markets in Sri Lanka, foreign investors actively participated in trading in CSE making volatility in Foreign Portfolio Investment (FPI), which lead the researcher to investigate the determinants of FPI under company performance (ROA, ROE and OPM), market specific factors (MC, MI and BETA), earnings quality (EQ) measured by total accruals (TA) and macro-economic variables (IR and GDP) using evidence from Sri Lanka. Using the three dependent variables of TNFP, TFP, and TFS the researcher analyzed quarterly data for the period from 2011 to 2016 under panel data regression model and arrived at the conclusion that, ROE, MC, MI, BETA, GDP Growth and IR has a significant relationship with foreign portfolio investment where the results suggested that earnings quality does not have any impact on foreign portfolio investment.

Keywords: *Colombo Stock Exchange, Earnings Quality, Foreign Portfolio Investment, Macro Economic variables*

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¹ Department of Finance, University of Kelaniya, Sri Lanka (ruwanmrp@kln.ac.lk)

² Department of Finance, University of Kelaniya, Sri Lanka (chathurinidesilva@gmail.com)

Introduction

Sri Lanka is a country that has overcome a dark era of terrorism and it is a country which has had a rapid growth afterwards. This post war period became the golden era of Sri Lanka where the economy and infrastructure have developed rapidly and the standard of living of people has improved at the same time coupled with political stability. During this period the foreign investors have paid serious attention on investment opportunities in Sri Lanka and this has caused the inflow of foreign investment in to the country in the modes of Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI) and Other Investment (Liyanage, 2015). This FPI mainly refers to the foreign purchasing and selling of shares and this paper is concentrating on the determinants of foreign purchasing and selling of shares signified as FPI.

Foreign Purchases, which were first allowed in 1990, increased rapidly to almost USD 300 million in 1994. However, after 1994, the stock market activity by foreigners subsided, and net foreign purchases have remained at negative or near zero levels thereafter. Foreign ownership, which peaked at 20% of the market in 1997, bottomed at 11% in 2000. This can be explained through the economic liberalization which happened during 1977 where the Sri Lankan government took steps to open the economy to the outside world. Although there was a policy on FDI prior to 1977, with the unfavorable economic condition during that time period there were less FDI coming into the country. Looking at the recent history, during 2012, foreign inflows achieved an all-time record of 38.6 billion where as in 2013 the net foreign inflow amounted to 22.7 billion. Repeatedly as in the period from 1994 to 1997, in 2015 it recorded a net outflow of 5.3 billion. As the most recent incident on 9th June 2017, the net foreign inflow reported a top 20 billion mark, shifting towards three years high.

By looking at the above statistics it is evident that the stock market activity has been highly volatile and has been driven by market sentiments as well as by the security situation in the country.

Considering the determinants of FPI, according to the previous empirical studies, different factors have been identified such as; Growth rate of real GDP, Real interest rate, Real exchange rate, Gross capital flow, Market capitalization, Institutional quality and Trade degree of openness (Chukwuemeka, Stella, Vector, and Oneyima, 2012). However, less concentration has been paid in order to identify company performance and earnings quality as determinants of FPI.

Research Problem

Prior researches have concentrated on determinants of foreign portfolio investment considering mainly on macro-economic factors such as Growth rate of real GDP, real interest rate, real exchange rate, gross capital flow, trade degree of openness (Ekeocha et al. 2008) however they have not considered the company specific factors such as Return on Assets (ROA), and Return on Equity (ROE).

Further, the outcome of the literature survey has identified that the studies to examine the determinants of the FPI has not considered the earnings quality as a determinant of the FPI. This is mainly due to the fact that earnings quality is an important determinant to allocate the resources of the investors. Further as cited in Wijesinghe and Kehelwalatenna (2017), Schipper and Vincent (2003) explain, that the low quality of earnings will provide defective resource allocation signals to investors.

Therefore, the current study addresses the existing gap particularly in Sri Lanka to investigate the determinants of FPI coupled with company specific factors, market specific factors, earnings quality factors and macro-economic factors.

The main objectives of the study can be outlined as follows.

- To investigate whether the Company performance affects the investment decision of foreign investors.
- To examine whether the market specific factors, earnings quality and macroeconomic factors affect the investment decision of foreign investors.

Based on these objectives the researcher has identified the following, as the explanatory variables for the study. ROA, ROE and OPM as determinants of company performance, MC, MI and BETA as market specific factors, TA as the proxy for earnings quality, RI and GDP as macro-economic variables.

The researcher has faced several limitations during the study such as; time limitation and unavailability of data. Furthermore, this study is limited to identifying IR and GDP as macro-economic factors and TA is the only identified proxy as a measure of the accruals quality aspect of earnings management.

Review of Literature

The capital inflows to an economy has different sources: Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI), other investment, government long term loans and private sector long term loans. An inflow is identified as FDI if the investor holds at least 10% of the domestic enterprise and FPI is identified as holding the stake of a domestic company less than 10%. This FPI includes purchase and sale of shares and other securities.

There are many theories developed to explain the determinants of capital flows. According to the Standard Neoclassical Theory, capital flows are driven by return differentials among countries. If there are no restrictions, capital will flow where returns are higher and capital is relatively scarce, i.e. to developed countries.

The second key theory is based on the Capital Asset Pricing Model (CAPM). When securities from different countries show low levels of correlations, investing in foreign assets improves the efficiency of a portfolio by reducing its overall variance. An implication of the CAPM is that if all investors followed such a strategy, all portfolios in the world should be expected to converge to a standard, perfectly diversified world portfolio in international assets (Bonizzi, 2013).

Another theoretical aspect is that the “Efficient Market Hypothesis” (EMH) developed by Professor Eugene Fama in 1960’s states that; “An efficient Capital Market is one which security prices adjust rapidly to the arrival of new information and, therefore, the current prices of securities reflect all information about the security”. This is referred to as an informationally efficient market. This hypothesis implies that no investment strategy based on current or historical information gain extraordinary large profits. To arrive at this hypothesis, the following assumptions have been made.

- A large number of competing profit maximizing participants analyze and value securities, each independently from others.
- New information regarding securities comes to the market in a random fashion.
- The competing investors attempt to adjust security prices rapidly to reflect the new information.

According to EMH the investors act quickly to new information so, it implies that whenever new information arrives to the market the investors start buying and selling of shares in respect of a capital market. This applies for investing in both home country and in a foreign country.

Based on that, we can expect that the foreign investors who invest in the Sri Lankan listed companies will also act according to the theory proposed by Professor Eugene Fama assuming that the current share prices reflect all information.

After looking at the theoretical aspect of the study from this point onwards the researcher will provide information on previous studies in order to identify the relevance of the current study and to critically evaluate previous studies based on the results that have been obtained.

Empirical Evidence for Foreign Portfolio Investment

Chukwuemeka, et al. (2012) investigated the long run determinants of FPI in Nigeria over the period of 1986-2006 converted into quarterly series. The variables used are market capitalization, sovereign risk premium, real exchange rate, level of institutional quality, investment, real interest rate, level of financial openness and trade openness. The study applied, time series analysis and discovered that there is a long run relationship among some of the variables applied. Obtained results indicated that FPI is co – integrated with the real rate of return on investments in the capital market, real interest rate and investment implying that these variables are bound together in the long run. The results indicate that FPI is positively related to real exchange rates, market capitalization, trade degree of openness and institutional quality in Nigeria.

Similarly (Liyanage, 2015) in her paper investigated the causes of capital flows into Sri Lanka in the form of push and pull factors, using the fully Modified Ordinary Least Square approach and the Vector Error Correction Model for the period from 2001 Q1 to 2015 Q2. The study consists of four specifications that employ total capital inflows as a dependent variable and disaggregate the total capital inflows to three main categories. Based on empirical estimates, the study observes that capital flows get attracted largely due to pull factors such as real GDP, interest rates and political stability. The study also establishes that the fundamental causes of capital flows in disaggregate levels differ. These results suggest that Sri Lanka needs to pay close attention to keep domestic macro-economic variables in the correct sequence in order to attract foreign capital.

Hariprasad (2016) in his studies searched about the stock ownership in Indian firms by foreign institutional investors for the period of 2013 to 2015. Several firm level characteristics are being used to measure the extent to which information asymmetry affects the level of foreign institutional investment ownership in these firms. The analysis reveals that the firm size and the book to market ratio are significant variables in selecting the equity investment by this investor group. There is not much empirical support for beta or the export ratio as determinants of firm level ownership. In their holdings of large firm stocks, there is strong evidence that FII's prefer to hold more shares of high export firms.

Empirical Evidence for Company Performance and Foreign Portfolio Investment

Mollah and Talukdar (2007) in their research on “Ownership structure, Corporate Governance and Firm's Performance in Emerging Markets” tested by using data for the period of 2002-2004 calculated the firm's performance using ROA, ROE and log of Market Capitalization has found that sponsor and government holding are significantly positively related to performance whereas institutional holding is insignificantly related to performance. However, board size and existence of audit committee chaired by sponsor director are significantly negatively related to firm's performance.

In Foreign Ownership and Firm Performance (Aydin, Sayim, and Yalama, 2007) a similar case has been studied where they examined whether there are significant differences on OPM,

ROA and ROE between foreign owned participation firms and domestic firms listed in ISE. The results reveal that the firms with foreign ownership operating in Turkey perform better than the domestic owned ones in respect to ROAs. The evidence supports the hypothesis that foreign ownership participation increases performance of firms.

In the study “Determinants of the Foreign Portfolio Investment” (Hansen et al., 2015) concentrated on firm specific factors such as US Listing, Market Capitalization, Market Index, ROA, Big N Auditor, Leverage, Dividend Yield, Controlling Shareholder, Market to Book Value, Foreign Sales and Domestic Institutional Ownership to test the firm level transparency and has found that the firm level transparency is positively related to foreign ownership.

Empirical Evidence for Earnings Quality

Chan et al., (2006) examined the association of earnings quality and stock returns for USA companies listed in New York Stock Exchange and NASDAQ markets. The study revealed that high accrual quality as measured by magnitude is associated with more stock returns. Similarly, Dimitropoulos and Asterious (2009) examined the impact of red flag ratio on stock prices for 101 firms listed in Athens stock exchange from 1994-2004. They found that accrual quality, ratio of sales to total assets and sales are positively related to the stock returns. However, they also found that ratio of net profit to sales is negatively related to stock price returns. The result indicated inconsistency of the measure of earnings quality.

Jing (2007) examined the association between stock price synchronicity and seven earnings quality measures (Accrual quality, persistence, predictability, smoothness, value relevance, timeliness and conservatism). The study revealed that positive association between accrual quality and stock price synchronicity. However, conservatism showed an insignificant relationship with stock price synchronicity.

Abdelghany (2005), conducted a study to assess the consistency of three earnings indicators; earnings surprise, smoothness and ratio of cash flow from operations to net income using a small sample of 90 companies listed in USA. The study revealed that there is no consistency among the three earnings quality measures in assessing the quality based on industrial classification.

Francis et al. (2004) examined the association between earnings quality indicators (accrual quality, persistence, predictability, value relevance, timeliness and conservatism) and cost of capital in USA. Their findings showed that firms with favorable earnings quality indicators have lower cost of equity than firms with poor attitudes of earnings quality indicators. However, their findings revealed that two of the earnings quality indicators which are predictability and conservatism show insignificant relationship with cost of capital. Therefore, this result revealed inconsistency among measure of earnings quality.

Methodology

The population considered for the current study was all the listed companies in CSE and the sample of 212 companies (Appendix A) having foreign stake during the period from 2011 to 2016 has been considered and the data for this study was collected through CSE data library, CBSL data library and quarterly interim reports of companies published in CSE website.

The researcher developed three models to be carried out using panel data regression analysis under E-views software based on the three dependent variables of TNFP, TFP and TFS and the developed equations are as follows.

Model 1

$$\text{TNFP} = \beta_0 + \beta_1\text{RoA} + \beta_2\text{RoE} + \beta_3\text{OPM} + \beta_4\text{MC} - \beta_5\text{BETA} + \beta_6\text{MI} - \beta_7\text{TA} + \beta_8\text{GDP} + \beta_9\text{IR} + \text{Ui} \dots\dots\dots 3.1$$

Model 2

$$\text{TFP} = \beta_0 + \beta_1\text{RoA} + \beta_2\text{RoE} + \beta_3\text{OPM} + \beta_4\text{MC} - \beta_5\text{BETA} + \beta_6\text{MI} - \beta_7\text{TA} + \beta_8\text{GDP} + \beta_9\text{IR} + \text{Ui} \dots\dots\dots 3.2$$

Model 3

$$\text{TFS} = \beta_0 - \beta_1\text{RoA} - \beta_2\text{RoE} - \beta_3\text{OPM} - \beta_4\text{MC} + \beta_5\text{BETA} - \beta_6\text{MI} + \beta_7\text{TA} - \beta_8\text{GDP} - \beta_9\text{IR} + \text{Ui} \dots\dots\dots 3.3$$

Where; TNFP equals to Total Net Foreign Purchases, β_0 equals to the Intercept coefficient, ROA equals to Return on Assets, ROE equals to Return on Equity, OPM equals to Operating Profit Margin, MC equals to Market Capitalization, BETA equals to Company Beta, MI equals to Market Index, TA equals to Total Accruals, GDP equals to GDP Growth, IR equals to Real Interest Rate and U_i equals to the Error Term.

ROA is defined as a profitability ratio that measures the net income produced by total assets during a period by comparing net income to the average total assets. In other words, ROA measures how efficiently a company can manage its assets to produce profits during the period. In the current study the researcher has calculated ROA as presented in equation 3.4.

$$\text{ROA} = \text{Net Income} / \text{Average Total Assets} \dots\dots\dots 3.4$$

OPM is operating profit before interest and taxes to the book of sales. This ratio demonstrates how much revenue is left, after all variable operating costs such as raw material costs have been paid. This ratio shows how strong and profitable a company's operations are. Equation 3.5 represents the OPM calculation.

$$\text{OPM} = \text{Earnings before Interest and Tax (EBIT)} / \text{Revenue} \dots\dots\dots 3.5$$

ROE is defined as profit after tax (Net Income) to the book value of total equity. This ratio tests the ability of a company to generate profits by using the shareholders' investment and it has been calculated as presented in equation 3.6.

$$\text{ROE} = \text{Net Income} / \text{Total Shareholders' Equity} \dots\dots\dots 3.6$$

To arrive at the total shareholder's Equity, the researcher has used the following formula (Equation 3.7).

$$\text{Total Shareholders' Equity} = (\text{Total Assets} - \text{Total Liabilities}) \dots\dots\dots 3.7$$

The accruals Model is one of the commonly used and easy to use method of measuring earnings quality. As discussed in the literature review this study is mainly based on identifying the accruals quality aspect of earnings quality. Among the two methods Balance

Sheet Approach (Healy,1985), (Jones, 1991) and Cash Flow Statement Based Approach (Dechow et al.,1995) the better approach identified by Hribar and Collins (2002) is cash flow based approach which has been used in this study to calculate the total accruals. Equation 3.8 shows the formula for calculating TA.

$$TA = NI - CFO \dots\dots\dots 3.8$$

Where;

NI = Net Income

CFO = Cash Flows from Operations

Hypotheses of the study

The hypotheses for this study have been developed based on the EMH theory where it assumes that the markets are informationally efficient and prices will be adjusted based only on new information. In simple terms EMH suggests that the stock prices will reflect and get adjusted according to the type of new information (Positive information stock price will rise due to high demand and when there is negative information the stock prices will fall due to excess selling) about the companies which is also in line with the Informational Theory.

Based on the above theoretical backdrop, the study has nine explanatory variables as outlined below.

Hypotheses for Model 1 and 2

- H1₁ - There is a *Positive* and *Significant* relationship between ROE and TNFP/TFP.
- H2₁ - There is a *Positive* and *Significant* relationship between ROA and TNFP/TFP.
- H3₁ - There is a *Positive* and *Significant* relationship between OPM and TNFP/TFP.
- H4₁ - There is a *Positive* and *Significant* relationship between MC and TNFP/TFP.
- H5₁ - There is a *Negative* and *Significant* relationship between BETA and TNFP/TFP.
- H6₁ - There is a *Positive* and *Significant* relationship between MI and TNFP/TFP.
- H7₁ - There is a *Negative* and *Significant* relationship between TA and TNFP/TFP.
- H8₁ - There is a *Positive* and *Significant* relationship between GDP and TNFP/TFP.
- H9₁ - There is a *Positive* and *Significant* relationship between Real Interest Rate and TNFP/TFP.

Hypotheses for Model 3

- H1₁ - There is a *Negative* and *Significant* relationship between ROE and TFS.
- H2₁ - There is a *Negative* and *Significant* relationship between ROA and TFS.
- H3₁ - There is a *Negative* and *Significant* relationship between OPM and TFS.
- H4₁ - There is a *Negative* and *Significant* relationship between MC and TFS.
- H5₁ - There is a *Positive* and *Significant* relationship between BETA and TFS.
- H6₁ - There is a *Negative* and *Significant* relationship between MI and TFS.
- H7₁ - There is a *Positive* and *Significant* relationship between TA and TFS.
- H8₁ - There is a *Negative* and *Significant* relationship between GDP and TFS.
- H9₁ - There is a *Negative* and *Significant* relationship between Real Interest Rate and TFS.

Results and Discussions

This chapter describes the descriptive statistics, correlations, different statistical test results of econometric modeling in order to identify whether the Company Performance, Earnings Quality and Macro-economic Factors affect the Foreign Portfolio Investment in the Sri Lankan context using 212 listed companies in the Colombo Stock Exchange from 2011 – 2016 and analyzing the quarterly data using E Views in respect of ROE, ROA, OPM, MC, BETA, MI, TA, GDP Growth and Real Interest Rate (Independent Variables). The dependent variables of the study are Total Net Foreign Purchases (TNFP), Total Foreign Sales (TFS) and Total Foreign Purchases (TFP).

The summary of descriptive statistics arrived through the variables input to E-views was outlined under “Appendix B – Table 16” and the number of observations considered was 3783.

To test the stationarity, of the series Panel Unit Root Test has been considered and based on the results outlined in “Appendix C”. Out of the variables considered in the current study, only LIR was not a stationary series at the first level so this series was converted in to its first lag to make it a stationary series. The results shown in “Appendix C” represent the results obtained after taking the first difference of LIR.

Table 1: Heteroscedasticity White Test

Statistic	TNFP	TFS	TFP
Obs*R-squared	481.1578	431.3388	682.0201
Prob. Chi-Square(54)	0.0000	**0.0000	**0.0000

Note: Number of observations 5088. ** indicate that the probabilities are significant at 1% level.

Based on the heteroscedasticity White test results which is presented in Table 1 above, all three models had heteroscedasticity problem. To remove the heteroscedasticity from the models all variables have been converted to their log form.

Using the stationary independent variables a correlation matrix has been obtained and based on the results presented in “Appendix D”, LROA and LROE had the highest correlation out of the nine explanatory variables having a correlation of 78.31% which is closer to the 80% threshold (Using Econometrics a Practical Guide, 2014). To remove the multi-collinearity, LROA which had the highest probability out of the two highly correlated variables have been removed from model estimation.

Before estimating the models using E-views the researcher carried out the Hausman Test to recognize whether a fixed effect or a random effect is appropriate for the three models.

Table 2: Hausman Test

Statistic	Model 1	Model 2	Model 3
Chi-Sq. Statistic	14.2323	31.4963	26.2482
Prob.	0.0759	*0.0001	**0.0010

Note: * represent that the probabilities are not significant at 1% level or 5% level. ** represent probabilities significant at 1% level.

**

Based on the results presented in Table 2 above, model one was not significant at either 1% or 5% level so a random effect is appropriate while model two and three was significant at 1% level i.e. the test suggested that fixed effect is appropriate for model two and three.

For Model two and three which were identified as fixed effect is appropriate, a Redundant Fixed Effect Likelihood Ratio Test has been carried out to recognize whether a pooled regression is appropriate or fixed effect is appropriate. Based on the test results (Table 3), for both the models it suggested that the fixed effect is appropriate.

Table 3: Redundant Fixed Effect Likelihood Ratio Test

Statistic	Model 2	Model 3
Cross-section F	4.2160	4.8551
Prob.	** 0.0000	** 0.0000

*Note: Number of observations Model 2 – 1415, Model 3 – 1483, ** represents the probabilities are significant at 1% level.*

Considering the test results of both Hausman Test and Redundant Fixed Effect Likelihood Test, for the first model a random effect regression was carried out while a fixed effect approach was exercised for the model two and three and the summary of the results are outlined as below.

Random Effect Test Results for Model One

According to the test results presented in “Appendix E”, Table 19, the R squared was 23.20% which indicated that the explanatory power of the independent variables was 23.20% i.e. the explanatory variables can predict a 23.20% change in the dependent variable TNFP. The adjusted R squared was 22.50%. The overall model was significant at 1% level represented a 0.0000 probability value of the F- statistic which expressed that the overall model was acceptable.

The value of intercept coefficient was -26.32, which indicated that the value of total net foreign purchases was -26.32 when all the explanatory variables were at zero level. The coefficient of LROE represented a positive value of 0.2151 (21.51%) indicating a positive relationship with LTNFP. The t-value was 2.6408 and the corresponding probability value was 0.0084 which indicated that LROE was a significant variable as well.

The LMC and LMI also had a positive relationship with LTNFP having coefficients of 1.0624 and 2.0529 respectively. The corresponding t-values and the probabilities explained that these two variables were significant in determining total net foreign purchases.

In contrast LOPM, LBETA, and DLIR had negative coefficients of -0.1548, -0.2143, and -0.8686 respectively which indicated an inverse relationship with the dependent variable LTNFP. Among these variables LBETA and DLIR were significant at 1% level and 5% level which indicated a negative and significant relationship with the dependent variable.

Fixed Effect Test Results for Model Two

As presented in “Appendix E”, Table 20, Model two had an R squared value of 63.90% which indicated a 63.90% explanatory power of independent variables and an adjusted R squared was 57.87%. The F- Statistic value was significant at 1% level which indicated the overall model was significant.

The value of the intercept coefficient was -37.81 which indicated that, when all the independent variables were at zero level the total foreign purchases were -37.81. LROE, LOPM, LMC, LMI and LGDP which had positive coefficients of 0.1596 (15.96%), 0.0794 (7.94%), 1.7168, 1.9108 and 0.1914 (19.14%) respectively indicated that there was a positive relationship with total foreign purchases out of which LROE, LMC, LMI and LGDP were significant which had t – values of 2.0292, 8.7070, 3.1028 and 2.4070 with probabilities of 0.0426, 0.0000, 0.0020 and 0.0162.

LTA, LBETA and DLIR had a negative relationship with the dependent variable which had coefficient values -0.0438, -0.0973 and -0.7680 (76.8%) and only the DLIR was significant at 1% level indicating a probability value of 0.0000.

Fixed Effect Teat Results for Model Three

Based on the results outlined in “Appendix E”, Table 21, the dependent variable for model three was total foreign purchases and it had a 63.68% R squared and a 57.38% adjusted R squared which represented a 63.68% explanatory power of the independent variables. The overall model was significant at 1% level with a 0.0000 probability value for the F- statistic.

The value of the intercept coefficient was -52.87 which explained that when all independent variables were at zero level the value of total foreign sales was -52.87. In this model LROE, LOPM, LMC, LMI, LGDP and LBETA exhibited a positive relationship with the dependent variable which had coefficient values of 0.0969, 0.0524, 1.8528, 3.2050, 0.1724 and 0.2066 respectively. Among them LMC, LMI, LGDP and LBETA were significant at 1% level which indicated a positive and significant relationship with the dependent variable.

LTA and DLIR had negative coefficients i.e. when the total foreign sales increase, LTA and DLIR reduces. Both of these variables were not significant which indicated 0.4547 and 0.1158 probabilities.

Hypotheses Testing

According to the above test results, in respect of ROE, MC and MI the alternative hypotheses were accepted in model one and two indicating a positive and significant relationship with TNFP/TFP. In respect of BETA, both models one and three accept the alternative hypotheses showing a negative but significant relationship (Model 1) and positive but significant relationship (Model 3), however in model two the results suggested a negative but insignificant relationship which lead the researcher to accept the null while rejecting the alternative hypothesis. Looking at the results obtained for GDP, in model one the alternative hypothesis was rejected showing no significant relationship with TNFP however in model two the alternative hypothesis was accepted showing a positive and significant relationship with TFP. Although in model three GDP was significant in determining TFS, the results suggested a positive and significant relationship which was the opposite of the researcher’s expectation on hypothesis. No model suggested that OPM had a significant influence on either TNFP, TFP or TFS which lead the researcher to reject alternative hypotheses which were developed. Similarly, no model suggested that TA the earnings quality measure was significant in determining FPI. In respect of IR model one and two suggested a significant relationship with TNFP and TFP however the relationship was negative. In model three IR had a negative relationship with TFS however the relationship was insignificant which resulted in rejection of the alternative hypothesis of IR.

Conclusion

Based on the results of all three models ROE, MC, MI, GDP, IR and BETA seemed to be significant in determining the foreign portfolio investment where it suggested that these factors affect the decision of the foreign investors, both individuals and institutions to invest in the Colombo Stock Exchange listed companies. The independent variables have been segregated in to four categories namely; company specific factors, market specific factors, earnings quality factors and macro-economic factors. These significant variables represent a company specific factor, all three market specific factors and all macro-economic factors considered as they have an impact on determining the foreign portfolio investment. No model suggested that TA (Earnings Quality Measure) is significant or have a significant impact on foreign portfolio investment in respect of TNFP, TFP or TFS. Hence, in simple terms except for the earnings quality all other three categories have been identified as having a significant impact on the foreign portfolio investment.

Considering the objectives of the research, based on the results obtained the researcher has been able to conclude the following;

- Company performance affects the decision of foreign investors in investing in the Sri Lankan Stock Exchange listed companies in respect of ROE.
- Earnings quality measured through TA do not affect the decision of foreign investors in investing in the Sri Lankan Stock Exchange listed companies.
- Market specific factors of MC, BETA and MI affects the decision of foreign investors in investing in the Sri Lankan Stock Exchange listed companies.
- Macro-economic factors of GDP and IR affects the decision of foreign investors in investing in the Sri Lankan Stock Exchange listed companies.

Recommendations

Based on the results obtained the following recommendations can be made.

The most significant variable in company performance category was ROE which was calculated as net income divided by total shareholders' equity of the company. The results suggested that all the companies should try to increase the rate of return for the shareholders in other words ROE by making the companies profitable in a sustainable manner so that the foreign investors willingly invest in the future ventures of the companies taking the risk of being a shareholder.

All the three variables considered under market specific factors (MC, BETA and MI) are significant in all three models. Market capitalization being a measure of the size of the business, the companies should try to increase MC by attracting more investors offering bonus shares, having right issues and paying dividends without going for new share issues which can lead to lose the controlling power of the company. Furthermore, this will encourage the existing shareholders to increase their investments.

BETA being the measure of risk of a company compared to the market, the companies should always try to reduce the company BETA by beating the competition and trying to increase the market share not only in respect of profitability but also concentrating on both the employees and the environment as well i.e. the company should go for a sustainable growth internally and externally.

The All Share Price Index moves with the changes in the share prices of all listed companies in the stock exchange. Thus, all the companies work together towards achieving a sustainable

growth while providing better returns for the shareholders, then the share prices of all companies will improve so that the market ASPI value will increase which will impact the decision of foreign investors investing in the Sri Lankan listed companies. In the macro-economic variable category GDP growth has been identified as a significant variable in determining foreign portfolio investment. This suggests that the economic growth should be at a stable level for the foreign investors to come and invest in the companies since economic growth directly affects the performance of the companies as well. The Sri Lankan government and the Central Bank of Sri Lanka has the prime responsibility of establishing proper policies, rules and regulations and helping out the companies to increase their businesses in order to keep the GDP growth at a stable level.

Another macro-economic factor which has been identified as significant is the Real Interest Rate of Sri Lanka. The real interest rate is calculated by adjusting the inflation to the nominal interest rate of the country. When foreign investors look for investing opportunities in foreign countries, the interest rate is an important factor they consider because the investors always expect at least to receive the interest rate which prevails in that country as the return for their investment. However, considering the time value of money, the real return they receive will be reduced due to inflation that is prevalent in the same country. As the results suggested, the Sri Lankan government and the Central Bank of Sri Lanka (CBSL) should make sure that an acceptable interest return is maintained which is higher than the international interest rates to attract more foreign portfolio investment to the country. And at the same time the government and CBSL should manage the money supply of the country so that the inflation will not compromise the real interest returns heavily.

Suggestions for Future Research

In this study the researcher has considered 212 companies listed in CSE which had foreign investment for a period of six years from 2011 to 2016 and nine independent variables have been considered. The researcher suggests that it is better if this research could be carried out using a sample of companies having the highest foreign portfolio investment (50 or 100) or choosing a specific sector and changing the market ASPI into a sector ASPI where the relationships can be observed closely than considering all the sectors.

The researcher believes that the same study can be conducted in identifying which factors are significant in respect of the twenty different sectors given in the sector classification in Colombo Stock Exchange, by conducting twenty different regressions using the same dependent and independent variables. Adding to that the researcher suggests that the future studies can be conducted using sector specific factors such as; S&P SL 20, Dividend Yield, P/E Ratio and Price to Book Value available in the CSE data library.

Furthermore, taking other proxies of earnings quality such as Sloan ratio, persistence, predictability and smoothness to determine the earnings quality, which might indicate that there is a significant relationship between earnings quality and foreign portfolio investment. As for the macro-economic variables, the relationship between inflation and exchange rate with foreign portfolio investment can be included as well.

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Appendices: Appendix A**Table 4: Sample Companies - Banks, Finance and Insurance Sector**

Company Name	Ticker	Company Name	Ticker
Aia Insurance Lanka Plc	CTCE	Lanka Ventures Plc	LVEN
Alliance Finance Company Plc	ALLI	Merchant Bank of Sri Lanka & Finance Plc	MBSL
Arpico Finance Company Plc	ARPI	Multi Finance Plc	MFL
Amana Takaful Plc	ATL	National Development Bank Pl	NDB
Asia Capital Plc	ACAP	Nation Lanka Finance Plc	CSF
Asia Asset Finance Plc	AAF	Nations Trust Bank Plc	NTB
Softlogic Life Insurance Plc	AAIC	Pan Asia Banking Corp Plc	PABC
Commercial Bank of Ceylon Plc	COMB	People'S Leasing & Finance P	PLC
Commercial Credit & Fin Plc	COCR	People'S Merchant Finance Pl	PMB
Citizen Development Bank	CDB	Sampath Bank Plc	SAMP
Central Finance Co Plc	CFIN	Sanasa Development Bank Plc	SDB
Ceylinco Insurance Co Plc	CINS	Seylan Bank Plc	SEYB
Dfcc Bank Plc	DFCC	Sinhaputhra Finance Plc	SFL
Finance Co Plc/The	TFC	Singer Finance Lanka Plc	SFIN
First Capital Holdings Plc	CFVF	Smb Leasing Plc	SEMB
Hatton National Bank Plc	HNB	Softlogic Capital Plc	SCAP
Hnb Assurance Plc	HASU	Softlogic Finance Plc	CRL
Housing Development Fin Corp	HDFC	Swarnamahala Financial Servic	SFS
Janashakthi Insurance Co Plc	JINS	Union Assurance Plc	UAL
Lanka Orix Finance Plc	LOFC	Union Bank Of Colombo Plc	UBC
Lanka Orix Leasing Co Plc	LOLC	Vallibel Finance Plc	VFIN
LB Finance Plc	LFIN		

*Note: Number of companies 43***Table 5: Sample Companies - Beverage Food and Tobacco Sector**

Company Name	Ticker	Company Name	Ticker
Bairaha Farms Plc	BFL	Lion Brewery Ceylon Plc	LION
Ceylon Beverage Holdings Plc	BREW	Lanka Milk Foods (CWE) Plc	LMF
Cargills (Ceylon) Plc	CARG	Nestle Lanka Plc	NEST
Ceylon Cold Stores Plc	CCS	Renuka Agri Foods Plc	RAL
Dilmah Ceylon Tea Co Plc	CTEA	Raigam Wayamba Salterns Plc	RWSL
Ceylon Tobacco Co Plc	CTC	Renuka Foods Plc	COCO
HVA Foods Plc	HVA	Three Acre Farms Plc	TAFL
Keells Food Products Plc	KFP		

Note: Number of companies 15

Table 6: Sample Companies - Chemicals and Pharmaseutical Sector

Company Name	Ticker	Company Name	Ticker
CIC Holdings Plc	CIC	Lankem Ceylon Plc	LCEY
Chemane Plc	CHMX	Muller & Phipps Ceylon Plc	MULL
Haycarb Plc	HAYC	Standard Capital Plc	SING
J.L. Morison Son & Jones	MORI		

Note: Number of companies 7

Table 7: Sample Companies - Construction and Engineering Sector and Footwear and Textiles Sector

Company Name *	Ticker	Company Name **	Ticker
Access Engineering Plc	AEL	Ceylon Leather Products Plc	CLPL
Colombo Dockyards Plc	DOCK	Hayleys Fabric Plc	MGT
Lankem Developments Plc	LDEV	Odel Plc	ODEL
Mtd Walkers Plc	KAPI		

*Note: * Construction and Engineering Sector companies – 4, ** Footwear and Textiles Sector companies – 3.*

Table 8: Diversified Sector

Company Name	Ticker	Company Name	Ticker
Aitken Spence Plc	SPEN	John Keells Holdings Plc	JKH
Browns Investments Plc	BIL	Richard Pieris & Co Plc	RICH
Ct Holdings Plc	CTHR	Softlogic Holdings Plc	SHL
Carson Cumberbatch Plc	CARS	Sunshine Holdings Plc	SUN
Dunamis Capital Plc	CSEC	Taprobane Holdings Plc	TAP
Expolanka Holdings Plc	EXPO	The Colombo Fort Land & Building Plc	CFLB
Browns Capital Plc	FLCH	Vallibel One Plc	VONE
Hayleys Plc	HAYL		

Note: Number of companies 15

Table 9: Sample Companies - Healthcare Sector and IT Sector

Company Name*	Ticker	Company Name**	Ticker
Asiri Hospitals Holdings Plc	ASIR	E-Channelling Plc	ECL
Asiri Surgical Hospital Plc	AMSL		
Ceylon Hospitals Plc	CHL		
Lanka Hospital Corp Plc	LHCL		
Nawaloka Hospitals Plc	NHL		

*Note: *Healthcare Sector companies- 5, **IT Sector companies – 1*

Table 10: Sample Companies - Hotels and Travels Sector

Company Name	Ticker	Company Name	Ticker
Aitken Spence Hotel Holdings	AHUN	Kandy Hotels Co 1938 Plc	KHC
Amaya Leisure Plc	CONN	Lighthouse Hotel Plc/The	LHL
Asian Hotels & Properties Pl	AHPL	Marawila Resorts Plc	MARA
Browns Beach Hotels Plc	BBH	Nuwara Eliya Hotels Co Plc	NEH
Ceylon Hotels Corp Plc	CHOT	Palm Garden Hotels Plc	PALM
Citrus Leisure Plc	REEF	Pegasus Hotels Of Ceylon Plc	PEG
Dolphin Hotels Plc	STAF	Renuka City Hotels Plc	RENU
Eden Hotel Lanka Plc	EDEN	Serendib Hotels Plc	SHOT
Fortress Resorts Plc	RHTL	Sigiriya Village Hotels Plc	SIGV
Galadari Hotels Lanka Plc	GHLL	Tal Lanka Hotels Plc	TAJ
Hotel Sigiriya Plc	HSIG	The Kingsbury Plc	SERV

Note: Number of companies 22

Table 11: Sample Companies - Investment Trust Sector and Land and Property Sector.

Company Name*	Ticker	Company Name**	Ticker
C T Land Development Plc	CTLD	Ascot Holdings Plc	ASCO
Cargo Boat Development Co	CABO	Ceylon Guardian Investment	GUAR
City Housing & Real Estate C	CHOU	Ceylon Investment Plc	CINV
Colombo Land & Dvlp Co Plc	CLND	Colombo Fort Investments Plc	CFI
Commercial Development Co	COMD	Colombo Investment Trust Plc	CIT
East West Properties Plc	EAST	Guardian Capital Partners Pl	WAPO
Kelsey Development Plc	KDL	Lanka Century Investments Pl	GREG
Overseas Realty Ceylon Plc	OSEA	Lee Hedges Plc	SHAW
Seylan Developments Plc	CSD	Renuka Holdings Plc	RHL
Serendib Engineering Group P	IDL		
York Arcade Holdings Plc	YORK		

*Note: *Land and Property Sector companies – 11, Investment Trust Sector companies – 9*

Table 12: Motors Sector and Oil Palm Sector.

Company Name*	Ticker	Company Name**	Ticker
C M Holdings PLC	COLO	Bukit Darah Plc	BUKI
Diesel & Motor Engineering	DIMO	Good Hope Plc/The	GOOD
Lanka Ashok Leyland Plc	ASHO	Indo-Malay Plc/The	INDO
Sathosa Motors Plc	SMOT	Selinsing Plc	SELI
United Motors Lanka Plc	UML	Shalimar Malay Plc	SHAL

*Note: * Motors Sector companies – 5, **Oil Palm Sector companies – 5*

Table 13: Sample Companies - Manufacturing Sector.

Company Name	Ticker	Company Name	Ticker
Abans Electricals Plc	ABAN	Kelani Tyres Plc	TYRE
Acl Cables Plc	ACL	Lanka Aluminium Indus Plc	LALU
Acl Plastics Plc	APLA	Lanka Tiles Plc	TILE
Acme Printing & Packaging Pl	ACME	Lanka Walltile Plc	LWL
Agstar Plc	AGST	Laxapana Batteries Plc	LITE
Alufab Plc	ALUF	Printcare Plc	CARE
Blue Diamonds Jewellery Worl	BLUE	Regnis Lanka Plc	REG
Bogala Graphite Lanka Plc	BOGA	Richard Pieris Exports Plc	REXP
Ceylon Grain Elevators Plc	GRAN	Royal Ceramics Lanka Plc	RCL
Chevron Lubricants Lanka Plc	LLUB	Sierra Cables Plc	SIRA
Central Industries Plc	CIND	Singer Industries Ceylon Plc	SINI
Dankotuwa Porcelain Plc	DPL	Swisstek Ceylon Plc	PARQ
Dipped Products Plc	DIPD	Teejay Lanka Plc	TJL
Hayleys Fibre Plc	HEXP	Tokyo Cement Co Lanka Plc	TKYO
Kelani Cables Plc	KCAB		

Note: Number of companies 29

Table 14: Sample Companies - Plantations, Power and Energy and Service Sector.

Company Name	Ticker	Company Name	Ticker
Plantations Sector		Power and Energy Sector	
Agalawatte Plantations Plc	AGAL	Lotus Hydro Power Plc	HPFL
Balangoda Plantations Plc	BALA	Lanka Ioc Plc	LIOC
Bogawantalawa Tea Estates	BOPL	Laugfs Gas Plc - Voting	LGL
Elpitiya Plantations Plc	ELPL	Panasian Power Plc	PAP
Hapugastenne Plantations Plc	HAPU	Resus Energy Plc	HPWR
Horana Plantations Plc	HOPL	Vallibel Power Erathna Plc	VPEL
Kahawatte Plantations Plc	KAHA	Vidullanka Plc	VLL
Kegalle Plantation Plc	KGAL		
Kelani Valley Plantations Pl	KVAL	Services Sector	
Kotagala Plantations Plc	KOTA	Ceylon Tea Brokers Plc	CTBL
Malwatte Valley Plant-Voting	MAL	John Keels Plc	JKL
Madulsima Plantations Plc	MADU		
Maskeliya Plantation Plc	MASK		
Namunukula Plantations Plc	NAMU		
Talawakelle Tea Estates Plc	TPL		
Watawala Plantation Plc	WATA		

Note: Plantation Sector companies – 16, Power and Energy Sector companies – 7, Service Sector companies – 2.

Table 15: Sample Companies - Trading, Stores and Supplies and Telecommunications Sector.

Company Name	Ticker	Company Name	Ticker
Trading		Stores and Supplies	
Brown & Co Plc	BRWN	Colombo City Holdings Plc	PHAR
Ceylon & Foreign Trades Plc	CFT	Gestetner of Ceylon Plc	GEST
Cw Mackie Plc	CWM	Hunter & Co Plc	HUNT
Office Equipment Plc	OFEQ	Telecommunication	
Radiant Gems International Plc	RGEM	Telecommunication	
Singer Sri Lanka Plc	SINS	Dialog Axiata Plc	DIAL
Tess Agro Plc	TESS	Sri Lanka Telecom Plc	SLTL

Note: Trading Sector companies – 7, Stores and Supplies Sector companies – 3, Telecommunications Sector companies – 2.

Empirical Analysis of the Technological Human Capital, for Exogenous Solow Economic Growth

Ramanayake, K. D.¹

This study explains human capital (Technological Labor) and technological intervention in the Solow model and its descendants. This study illustrates one of the major applications of the Solow model, an expose that incorporates human capital, moreover it explains the role of human capital and technological adaptation using the empirical evidence of human capital and economic growth in the world. This study is based on a secondary data method while secondary data is also taken for the analysis and reports. This means that both quantitative and qualitative methods are meaningfully integrated and present in the discussion. Under results of this study, empirical evidence shows that the human capital and the physical capital are the key factors of the productivity growth in the world. Therefore, the average investment rates in the five richest countries are only 2.9 times larger than the average investment rates in the five poorest countries. Moreover, education or years of schooling has contributed to the higher rate of investment. Because of that, the average educational attainment in the five richest countries is about 8.1 years greater than the average educational attainment in the five poorest countries. Finally, Human Capital in Solow Model affects the economic and technological aspects in cross country differences. It is important to understand which of these proximate cases are significant for economic growth performances. Therefore, if a country's human capital and technology usage is higher, that results in improving its GDP growth.

Keywords: *Empirical Growth, Human Capital, Solow Model, Technology*

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¹ University of Sri Jayawardenepura, Gangodavila, Nugegoda
(kasun.ramanayake@stud.unifi.it)

Introduction

Human capital not only increases productivity, but it also affects the new technological growth (Nelson and Phelps, 1996 and Ted Schultz, 1964, 1975). The main objective of this study is introduced as ‘human capital with aggregate productivity relationship to the academic world’. For that this paper has used the standard Solow model for analyzing the empirical data. The world believes that the human capital plays an important role in growth models. Here this study provides a simple presentation of this main objective while discussing how this human capital may satisfy economic growth. Moreover, human capital not only increases productivity, but it also affects the new technological growth. Nelson and Phelps (1996) and Ted Schultz (1964, 1975) introduced this relationship to the academic world. They believed that human capital had played an important role in growth models. Here this study also provides a simple presentation of this main objective while discussing how this human capital may satisfy the economic growth.

Literature review

This section explains the historical and revolutionary relationship between human capital and production. This ‘economics thoughts’ have been illustrated considering the importance of the human capital intervention for the growth of economics. Thus this literature illustrates the theoretical models where exogenous macroeconomist has been used for analyzing the empirical data in the past. The growth accounting framework introduced and applied in Solow (1957), Jorgensen, Golop, and Fraumanti (1987) gave an advance improvement to this model. They also highlighted the measurement strategies and theoretical improvements in the human capital and the Solow growth model.

The concept of Human capital was introduced by Gary Becker (1965), Ted Schultz (1965) and Jacob Mincer (1974). The standard models of the human capital used in labor and other areas of economy have been developed by Beker (1965), Yoram Ben Porath (1967), and Mincer (1974). After that, this relationship between human capital and Solow growth has been re-introduced by Heckman, Lochner, and Taber (1998), Jorgensen (2005), Guvenen and Kuruscu (2006), and Manuelli and Sechadri (2006).

Although technological human capital externalities were introduced by Jacob (1970), Lucas (1988), and Azariadis and Drazen (1990), they were first discussed by Marshall (1890). He argued that the increasing geographical concentration of the inputs increases productivity. After that Schultz (1965) suggested the role of the human capital in adapting to change and implementing new technologies. For this explanation, he used agricultural technologies and human capital. Nelson and Phelps (1966) formulated the same idea and presented a simple model. Foster and Rosenzweig (1995) provided further evidence for the role of human capital and economic development. Also, Benhabib and Spiegel (1994), Aghion and Howitt (1998) reconfirmed this idea.

The augmented Solow model with human capital is a representation of the model presented by Mankiw, Romer and Weil (1992), which illustrated treating human capital as a separate factor to the production. They also provided the regression estimation of the Solow model. Moreover, they introduced estimating the productivity with technology and human capital across the world. After Klenow and Rodriguez (1997), Hall and Jones (1999) and Klenow and Rodriguez (1997) took it to their shoulders to develop this further. Recent macroeconomics models that feature human capital include Galor and Tsiddon (1997), Greenwood and Yorukolu (1997), Caselli (1999) and Moav (2000) as well as Howitt and Voilante (2004).

Human capital with Solow model

Gregory Mankiw, David Romer, and David Weil published an important paper in 1992 titled “A Contribution to the Empirics of Economics growth”. It evaluated the empirical implication of the Solow model and concluded that it performed very well. Then they identified that this model could improve even more if the human capital is included; that is, including labor in different economic conditions and educational skills. Extending the Solow model to include human capital or skilled labor is relatively straightforward as we will show in the following section:

Suppose that output, Y in an economy is produced by accumulating the capital, K with the skilled labor. According to the condition of constant returns, this is shown by Codd Douglass production function where A shows labor augmenting technology that grows at the rate of g .

$$Y = K^\alpha (AH)^{1-\alpha}, \quad (2)$$

In this economy, human capital is accumulated by spending time learning new skills instead of working. Let u represent the function of an individual's time spent on learning skills and let L^2 show the total amount of labor used in production in the economy. We use the assumption that unskilled labor u generates the labor of H . It shows that,

$$H = e^{\varphi u} L, \quad (2)$$

φ is a positive constant parameter. Notice that if $u = 0$ then $H = L$. This means that all the employees are unskilled. Increasing u , a unit of unskilled labor, increases the effective unit of skilled labor H . Simply, when the unskilled labor spends time to learn necessary skills, it results in increasing the skilled labor of the economy. Let's use the log and derivatives for (2),

$$\frac{\partial \log H}{\partial u} = \varphi \rightarrow \frac{\partial H}{\partial u} = \varphi H. \quad (3)$$

Let's think u increases by 1 unit (suppose this is one additional year of schooling) and think $\varphi = 0.10$. In this case, H rises by 10 percent. Namely, φ is the positive parameter of the human capital. The case above proportionally affects to drive the exponentiation e in the equation. This case is included in a number of literatures in the education and labor economics which reinforces that an additional year of schooling increases the wage of an individual worker.

Physical capital is composed by the investment rate of the economy.

$$\dot{K} = Y_{sk} - dk \quad (4)$$

Here, sk is the investment rate of the physical capital and d is the constant depreciation rate.

Now we estimate this model using the mathematical concept. First, we let lower case letters of the equation be divided by the stock of unskilled labor, L , and rewrite the aggregate production function in terms of output per worker. It is given by,

$$y = k^\alpha (Ah)^{1-\alpha} \quad (5)$$

Here, $h = e^{\varphi u}$ it illustrates how a person takes the dissection, how much time is spent on improving his skills instead of working. Notice that here we will assume that u is constant and it is given exogenously.

² $L = (1 - u)P$, P is the total population of the economy.

Note that h is constant, which means that the production function (4.5) is similar to the basic Solow model balance of growth path. According to that, y and k grow at the constant rate g and the rate of technological progress in given time t .

Steady state and the human capital

This model is estimated by considering the steady-state variable. This state variable is constant along a balanced growth path. Let's recall that the steady state variables were terms such as y/A . At this point h is constant and we can define the state variables by defining Ah . Given these steady variables with the tilde, the equation (5) implies that,

$$\tilde{y} = \tilde{k}^\alpha \quad (6)$$

It was mentioned that the capital accumulation equation can be written in terms of the new steady state variables as,

$$\tilde{k}^1 = \tilde{y}_{sk} - (n + g + d)\tilde{k} \quad (7)$$

This equation (7) was solved. Therefore, we are not including the stages of solving the equation here. What we are doing here is adding human capital to the dynamic Solow model.

The steady state value of \tilde{k} and \tilde{y} is found by setting $\tilde{k}^1 = 0$. It is shown by,

$$\frac{\tilde{k}}{\tilde{y}} = \frac{sk}{n+g+d} \quad (8)$$

Substitute this condition into the equation (6), we can find the steady state value of the output per technological ratio \tilde{y} given by,

$$\tilde{y}^* = \left(\frac{sk}{n+g+d} \right)^{\alpha/(1-\alpha)} \quad (9)$$

Rewriting this in terms of output per worker shows,

$$\tilde{y}^*(t) = \left(\frac{sk}{n+g+d} \right)^{\alpha/(1-\alpha)} hA(t) \quad (10)$$

The reason for including t in the equation (10), reminds us which variables are growing over time.

In summarizing this section, we have discussed the theatrical explanation of Solow model as to why some countries are rich and some are poor. The reason simply is that the rich countries have a higher investment rate of technology, human capital, and physical capital which enables them to invert a large fraction of time to make human capital and labor skills. Therefore, in the steady state, per capital output grows at the rate of the technological progress g , as in the basic Solow model. In the next section we will discuss the major role of human capital in technology.

Human capital for technology

Human capital not only increases productivity, but it also affects the new technological growth. Nelson and Phelps (1996) and Ted Schultz (1964,1975) introduced this relationship to the academic world. They believed that human capital had played an important role in growth models. Here we provide a simple presentation of this main aspect while discussing how this human capital may satisfy the economic growth.

Consider the flowing model to represent the basic ideas of the model. Suppose that the aggregate output in the economy is given by where L is the constant labor force and $A(t)$ is the technology level of the economy.

$$y(t) = A(t)L, \quad (11)$$

There is no marginal capital accumulation or labor supply, and the only variable that changes over time is technology, $A(t)$.

Suppose that $A_F(t)$ is the world technological frontier. This has not yet been applied to the production process because this frontier might correspond to technology in some countries. Suppose that $A_F(t)$ evolves exogenously according to the differential equation. This is given by,

$$\frac{\dot{A}_F(t)}{A_F(t)} = g_F, \quad A_F(0) > 0 \quad (12)$$

h is the human capital of the labor forces. But notice that h is not included in (4.12) the production functions because human capital does not play a productive role in this equation. Instead the only role of human capital in the current model is to facilitate the implementation and the use of frontier technology in the production process. Let's evaluate the technological level of the country due to (t) . But here, $A(t)$ is governed by a different equation.

$$\dot{A}_F(t) = gA(t) + \phi(h)A_F(t), \quad (13)$$

In the initial condition of this, $A(0)$, situated between zero and the minimum value of the world technological frontier, can be represented as $A(0) \in [0, A_F(0)]$. The parameter g is strictly less than the g_F and measures the growth rate of technology, $A(t)$, resulting from the collaboration of the other sources of production growth. Firstly, before everything we need to improve the technology in this equation (4.13) because technological improvement generates implementation and adoption of frontier technologies. The extent of the second source of improvement is determined by the average human capital of the workforce, h . Therefore, the role of the human capital in the context of adoption and adaptation of technology is illustrated by the second sources, ϕ . Suppose that ϕ is in nondecreasing function and it satisfies this condition as shown below where, $\bar{h} > 0$.

$$\phi(0) = 0 \text{ and } \phi(h) = g_F - g > 0 \quad \text{and for all } h \geq \bar{h},^3 \quad (13)$$

This specification illustrates that the human capital of the workforce regulates the capability of the economy to collaborate with new developments highlighted in the frontier technologies. Suppose that the workforce had no human capital. Then what happens to the frontier technology? Simply, if the workforce has no human capital, there is no adoptions or implantations of the frontier technologies and $A(t)$ grows at the rate g . In situation $\bar{h} > 0$, there is a rapid growth in the technologies. Therefore, the ratio of the country's technology to the frontier technology is also determined by the human capital. It is given by,

$$A(t) \rightarrow \frac{\phi(h)}{g_F - g} A_F(t) \quad (14)$$

Initial situation here is $(t \rightarrow \infty)$.

Nelson and Phelps (1996) emphasized the role of human capital in several situations. For example, vintage empirical evidence illustrates that educated farmers are more likely to adopt

³ \bar{h} is no skills labor or no human capital

new technologies and seeds (Foster & Rosenzweig, 1995). Nelson Phelps's model shows that there is a strong relationship between the economic growth and the level of human capital. Also, they determined that there is another strong correlation between economic growth and changes in the human capital. Benhabib and Spiegel (1994) suggest the same result because the key role of the human capital is not to increase productivity capacity, but to improve technological adaptations of the economy. According to them, if the role of human capital in facilitating the technology adoption is taking place within the boundaries of the firm, then this will affect the marginal productivity of capital and earnings of the skilled labors. Workers will generate a faster and more effective technological adaptations, which would be combined with the increase in the net present value of the firm. Moreover, human capital facilitates technology adaptation not only in the firms but also in the labor market. Simultaneously, human capital generates a number of social externalities. These externalities are injected to the external and internal level to benefit at a global level. The next section of this chapter will illustrate this human capital contribution for economic growth according to the global cross-country empirical data.

Empirical analysis of the human capital in economic growth and technology

Robert e. Hall and Charles I. Jones (1999) published a very interesting paper called "*Why do some countries produce so much more output per worker than others*". This paper illustrates the relationship between human capital and aggregate output growth in 127 countries in the world. For this, they used Solow relationships with the human capital model introduced by Mankiw, Romer, and Weil (1992) and Dougherty and Jorgenson (1996). Robert and Jones (1999) used three different equations for their analysis.

First,

$$Y(t) = K^\alpha (AH)^{1-\alpha} \quad (15)$$

where Y is aggregate output. K denotes the stock of physical capital. H is the amount of human capital or capital augmented labor used in production and A is the labor augmented technological production. Suppose that L is homogeneous in the economy; each labor has been trained with E years of schooling. According to this H is given by.,

Second,

$$H(t) = e^{\emptyset(E)} L(t) \quad (16)$$

Mincer (1974) introduced this specification, called "Mincerin wage regression", which reflects the efficiency of a unit of labor with E years of schooling. An additional year of the schooling increases the efficiency of the $\emptyset(E)$. Note that if $\emptyset(E) = 0$ all of E in standard production functions with undefined labor condition or we may say unskilled labor with production functions.

Third,

$$y(t) = \left(\frac{K_t}{Y_t}\right)^{\alpha(1-\alpha)} h_t A_t \quad (17)$$

According to the Solow conditions, (17) shows production function in terms of output per worker, $y = Y/L$, and $h = H/L$ is human capital per worker.

Then, let's measure productivity and difference in output per worker, in to difference in capital accumulations, human capital per work, and aggregate productivity in the economies. We use data on output labor input, average education, and physical capital for the year 1988.

Table 1 illustrates the value of capital per workers in different countries. These values are decomposed by the output in three multiplicative terms in the equation (17). The three terms are namely, the physical capital intensity, the contribution from human capital per worker, and the generating productivity.

Comparisons to the data of the countries illustrated in Table 1, show that output per worker in Canada is about 94 percent of that in the United States. Canada and USA have the same capital intensity, but there's only 91 percent of USA human capital per worker. Canadians have a lower output per worker but, compared to the USA, they manage the same productivity rate. Other OECD economies such as the United Kingdom also have productivity levels close to the productivity in the U. S. Italy and France are slightly higher; Germany is slightly lower.

Table 1: Productivity Calculations: Ratios to U. S. Values year 1988

Country	Y/L	$\left(\frac{K_t}{Y_t}\right)^{\alpha(1-\alpha)}$	H/L	A
USA	1.000	1.000	1.000	1.000
Canada	0.941	1.002	0.908	1.034
Italy	0.834	1.063	0.650	1.207
West Germany	0.818	1.118	0.802	0.912
France	0.818	1.091	0.666	1.126
UK	0.727	0.891	0.808	1.011
Hong Kong	0.608	0.741	0.735	1.115
Singapore	0.606	1.031	0.545	1.078
Japan	0.587	1.119	0.797	0.658
Mexico	0.433	0.868	0.538	0.926
Argentina	0.418	0.953	0.676	0.648
U.S.S.R	0.417	1.231	0.724	0.468
India	0.086	0.709	0.454	0.267
China	0.060	0.891	0.632	0.106
Kenya	0.056	0.747	0.457	0.165
Zaire	0.033	0.499	0.408	0.160
Average, 127 countries	0.296	0.853	0.565	0.516
Standard deviation	0.268	0.234	0.168	0.325
Correlation with Y/L (logs)	1.000	0.624	0.798	0.889
Correlation with A (logs)	0.889	0.248	0.522	1.000

Source: Hall and Charles I. Jones (1999)⁴

U.S.S.R. has an extremely high physical capital and a relatively higher human capital but a rather low productivity level. All developing countries in the table show differences in productivity and the different values of output per worker. For example, India's output per worker is about 8 percent of that in the United States. The lower productivity has affected the

4 Notice that the elements of this table are empirical counterparts to the components in the equation (4.14). All the ratios to the U.S.A Value and this means that the first column of data is the product of the other three columns.

low output per worker, because the total productivity cannot be improved without the human capital and technology, which in turn improves the output per worker.

Last four columns of (Table 1) illustrate the average and standard deviation of the collaboration of inputs and productivity to differences in output per worker. According to the data, output per worker in the five countries in 1988 with the highest levels of output per worker was 31.7 times higher than the output per worker in the five lowest countries. Let's find out the factors of this result in 1988. A relatively small difference was due to physical and human capital: differences in capital intensity and human capital per worker are contributing factors of 1.8 and 2.2, respectively, to the difference in output per worker. Therefore, the human capital and the physical capital are the key factors of the productivity growth in the world in 1988. Moreover, education or years of the schooling contributed to the higher rate of investment. Therefore, the average investment rates in the five richest countries are only 2.9 times larger than the average investment rates in the five poorest countries. Because of that, the average educational attainment in the five richest countries is about 8.1 years greater than the average educational attainment in the five poorest countries. However, Table 2 proves a significant correlation between human capital and technological capital again in OECD and non-OECD countries

Empirical evidence of the human capital and technology

Following Benhabib and Spiegel (1994) we will empirically assess the influence of human capital on growth and technology adoption using cross-country growth regressions. The preferred empirical specification in Benhabib and Spiegel (1994) is as follows. We use the Nelson and Phelps (1996) model to explain this condition which we discussed in section 4.3.

$$(\ln Y_{iT} - \ln Y_{i0}) = \beta_0 + \beta_1 H_1 + \beta_2 H_1 \left[\frac{y_{max}}{y_i} \right] + \beta_3 (\ln K_{iT} - \ln K_{i0}) + \beta_3 (\ln L_{iT} - \ln L_{i0}) + \varepsilon$$

Where Y_i is the aggregate production or GDP in the country, K_i is the physical capital stock of the country, L_i and H_i is the labor force and human capital in the economy. The annual average of schooling in the labor forces in between period 0 and period T $\frac{y_{max}}{y_i}$ is a measure of the catching-up effect, which is the ratio of income per capital in the richest country that can be interpreted as the technological gap in the developing or poor countries. Human capital of the economy is assumed to affect the technological progress by having an influence on the domestic innovation, $\beta_1 H_1$ and on the collaboration of foreign technology, $\beta_2 H_1 \left[\frac{y_{max}}{y_i} \right]$.

Table 2 represents the result of this estimation using the human capital variable in 1994 and using the IASA/VID database. The data illustrates the full sample of OECD countries and non-OECD countries in the world. There was another database in Table (2). Using this second database of Kyriacou (1991) we can explain the effects of the education level of labor in technology adaptation in the OECD and the non-OECD countries in 1994. Firstly, let's analyze Table 2.

Table:2: Benhabib and Spiegel (1994) regressions.

	<i>Kyriacou Data</i>			<i>IIASA/VID Data</i>		
	<i>Full Sample</i>	<i>OECD</i>	<i>Non-OECD</i>	<i>Full Sampl</i>	<i>OECD</i>	<i>Non-OECD</i>
H	-0.014 (0.014)	-0.015 (0.012)	-0.025 (0.022)	-0.023 (0.009)	-0.018 (0.011)	-0.053 (0.022)
$H_1 \left[\frac{y_{max}}{y_i} \right]$	0.0006 (0.001)	0.004 (0.003)	0.007 (0.001)	0.005 (0.001)	0.007 (0.004)	0.005 (0.002)
$\ln K_{iT} - \ln K_{i0}$	0.472 (0.072)	0.551 (0.106)	0.482 (0.092)	0.502 (0.063)	0.433 (0.443)	0.532 (0.101)
$\ln L_{iT} - \ln L_{i0}$	0.188 (0.164)	0.197 (0.160)	0.264 (0.278)	0.064 (0.166)	0.262 (0.135)	0.090 (0.345)
Obs	78	19	59	62	19	43
R^2	0.70	0.90	0.67	0.63	0.90	0.58

According to the results of IIASA/VID for the OECD sample, a 10 percent significant parameter for educational level affects the technological adaptation but this adaptation only appears significant for the non-OECD sample. Moreover, there are significant positives as well as negative effects of not having a human capital variable when using the full sample and the non-OECD countries. Non-OECD countries imply that the overall effect of human capital on growth is positive for the OECD group level of their GDP per worker and it is lower than 10 percent of the OEDS countries in the sample.

Next, we illustrate the differentiation of the technological absorption between developed and developing countries. For this Benhabib and Spiegel (1994) re-ran the regression using the education by age group of the OECD and non-OECD countries. After that, the new regression shows the individual inclusion of each human capital variable. According to this, non-OECD countries do not appear significantly different in the age groups, but on the other hand, OECD sample shows that the human capital level corresponding to the young age group interacts in a significant level of development in technology and human capital.

Conclusion

In conclusion, according to this analysis, this study illustrates how lower productivity has affected the low output per worker, because the total productivity cannot be improved without the human capital and technology, which in turn improves the output per worker. Moreover, on the one hand it can be seen that the time spent on the education of the workers and the youth, generated a significant DGP growth across the countries. On the other hand, the education level of the workers or the youth absorb the technological improvement in the developed economics. Finally, one of the most important factors we learn in this study is, how 'Human Capital in Solow Model' affects the economic and technological cross country differences. It is important to understand which of these proximate cases are significant for economic growth performances. But some level of developments show that a country is poor because it has insufficient human capital, physical capital, and technology. Another significant point is that in the countries with an abundant human capital and technology, there are factors that cause one person to have more money than the other person, namely the income inequality of the economy. A good understanding of the economic growth and

differences in the production functions proved that the engine of economic growth is technology and human capital, therefore these findings provide inputs for designing policies for the improvement of the human capital with exogenous growth around the world.

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Impact of Enterprise Risk Management Practices on Performance of Insurance Companies in Sri Lanka.

Abeyrathna, S. P. G. M.¹ and Lakshan, A. M. I.²

Enterprise risk management (ERM) has gained an increasing attention among the corporate managers in the recent past as a strategic approach to managing risk. This study empirically verifies whether the adoption of ERM has an impact on firm performance and uses both primary and the secondary data relating to the Sri Lankan insurance companies. 230 executive level employees from 26 Sri Lankan insurance companies have been selected as the sample of this study using stratified random sampling technique and primary data were collected using a structured questionnaire. Return on Assets (ROA) and Tobin's Q are used as proxies to measure the firm performance and ERM practices have been measured based on the guidelines of COSO ERM framework. Descriptive statistics, Correlation analysis and regression analysis are used to analyze data. Results of the mean testing reveals that three components of COSO ERM framework namely, Internal Environment, Objective setting and Risk Assessment indicate a high level of practice. Further, correlation analysis indicates two independent variables namely, control environment and Information & communication have a significant relationship with ROA. At the same time, two independent variables namely, objective setting and Information & communication have a significant relationship with Tobin's Q. Hypotheses testing identified that Control activities; Information & communication and monitoring are the most crucial variables which have a positive impact on the performance of the insurance industry. These results indicate that, even though the level of implementation of ERM practices in Sri Lankan insurance industry is moderate / high levels, the other than Control activities, Information & communication and monitoring all other five components are not showing significant impact towards the performance. It implies that the expected value addition from the ERM practices have not been achieved by the Sri Lankan insurance companies yet. Findings of this study contributes methodologically as researcher used robust model to measure ERM practices and the results may be helpful to Insurance companies in Sri Lanka to improve their ERM practices and to adopt efficient strategies to improve firm financial performance through the implementing proper ERM practices.

Keywords: *Enterprise Risk Management (ERM); COSO ERM Framework, Firm Performance, Return on Assets, Tobin's Q*

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¹ Department of Accountancy, Advanced Technological Institute-Kegalle, Sri Lanka (gayan.a@slate.ac.lk)

² Department of Accountancy, University of Kelaniya, Sri Lanka (lakshan@kln.ac.lk)

Introduction

The presence of an evolving risk environment continues to present challenges and opportunities for the survival of businesses universally. Firms have recognized the significance and necessity of managing risks and the importance of doing this in a more facilitated way by considering both internal and external environment to adequately understand and manage these risks. By adopting those, firms are trying to avoid possible financial losses and damage to company reputation. On the other hand, firms which fail to manage risk also fail to maximize the opportunities that risky environment present to them for their own competitive advantage. Empirical studies are providing enough evidence to prove that more and more firms are adopting risk management practices and these practices are influenced by both internal and external variables (Collier et al., 2007).

According to ISO 31000, risk refers to the effect of uncertainty on objectives where the effect could be a positive or negative deviation from the expected outcome. That means the risk is often described by an event, a change in circumstances or a consequence. Risk refers to a condition in which there exists a quantifiable dispersion in the possible outcomes from any activity (CIMA-Jasmin Harvey and Technical Information Service 2008). Risks can have an impact on an organization in any tenor; short, medium and long term. The terms risk and uncertainty are used interchangeably. Some scholars have been distinguished risk and uncertainty based on the possibility of quantification where the risk is identified as quantifiable uncertainties. Based on that the risk can be perceived in three ways as mainly based on its impact; threat which is known as downside risk, uncertainty and opportunities which are known as upside risk (CIMA-Jasmin Harvey and Technical Information Service 2008).

Risk management is managing the risk faced by the organization as a vital part of the strategic management of the organization. The importance of risk and risk management was widely recognized with the financial crisis in 2007, as many organizations had not identified the upcoming crisis (Ashby,2010). Nowadays, many organizations/people have introduced models for ERM (Ex: COSO ERM framework, ISO 31000). Those are providing detailed practical application guide, and key components and risk-management principles for organizations regardless of size. Consequently, Enterprise Risk Management (ERM) is adopted as a strategic tool structured to help management to respond to impending risks and manage uncertainties using an integrated and all-inclusive approach.

In prior empirical literature various determinants and implications relates to ERM have been studied and documented. Most prior studies have expressed the relationship between ERM practices and the performance of business firms (Alawaththegama,2018; Alawaththegama,2017; Dickinson, 2001; Ibrahim et al.,2015; Kinyua et al.,2015; Liebenberg et al.,2003; TEO et al., 2016; Gates et al., 2013; Hoyt et al.,2011; Beasley et al.,2008; Kiprop et al., 2017). And most of the prior researchers (Liebenberg et al.,2003; Beasley et al.,2008) have used dummy variables such as the presence of chief risk officer, risk committee, big four auditors when assessing the adoption of ERM by business firms. Some of these researchers have recognized that as limitations and they have directed future researchers to adopt some strong methods to assess ERM adoption. Furthermore, Other than the study of Alawaththegama (2018) ;(2017), researchers did not identify any related study in case of Sri Lankan context. Alawaththegama (2018); (2017) also has consider the diversified companies as the sample for one of his study and banking and finance industry as the sample for another study. Therefore, ERM practices in insurance companies become researchable area in Sri Lankan context. Therefore, this study contributes to the existing literature by adding more evidence to the study of the implications of ERM. In Sri Lankan context, the ERM literature is still in an early stage of development where additional research is required.

If risk is not managed well, that could lead to collapse of organizations, especially those whose core business deals with day to day handling of risk. Therefore, risk management should be at the core of an organization's operations by integrating risk management practices into processes, systems and culture of the entire organization in any type of business firms. Distribute risk across different participants is one of the central functions of an insurance company (Merton, 1995). According to

Saunders and Cornett (2008), modern insurance companies are in the risk management business and they have mentioned that insurance companies undertake risk bearing and management functions behalf of their customers as risk specialists. This indicates that management of risks should take the centre stage in the operations of insurance companies. According to the available literature, insurance companies have increased their focus on risk management in recent years. Meredith (2014) has noted that there should be careful judgement, by management of insurance companies, of insurable risks in order to avoid excessive losses in settling claims. Okotha (2003) has concluded risk management is an important factor in improving financial performance.

In Sri Lankan context, As per the Central Bank Annual report 2018, based on the business surveys conducted by them, delayed implementation of structural reforms and policy uncertainty that prevailed throughout the year together with the heightened political tension prevailed in the latter part of the year had an adverse impact on much-needed business confidence and investor sentiment. Despite these economic and political uncertainties, overall insurance industry reported total Gross Written Premium (GWP) of LKR 181,506 million in 2018 compared to LKR 164,960 million reported in 2017 and has grown at a moderate phase of 10.03% in nominal terms in 2018 compared to 15.30% recorded in 2017. Similar to previous years, motor insurance largely contributed to the GWP. However, general insurance industry grew at a slow phase (8.37%) compared to double digit growth recorded since 2015. According to these figures/ data, insurance industry in Sri Lanka is not showing sound growth. So, investigating the factors like ERM practices which can be affected to performance is vital.

According to Gordon et al. (2009), the view of a number of scholars is that enterprise risk management offers companies a more comprehensive approach towards risk management than the traditional silo-based risk management perspective and because of this, ERM is presumed to lower a firm's overall risk of failure hence increase the performance and so the firm's value. Further, a recent study of the National Association of Insurance Commissioners (NAIC) has been concluded that core risks in the insurance business include "underwriting, credit, market, operational, liquidity risks, etc." And it has been suggested that, there is a tremendous opportunity for risk management in insurance companies to make a positive impact.

In Sri Lankan insurance industry, according to the annual reports of insurance companies, they are implementing Enterprise Risk Management Practices. However, no proper study has been conducted in case of identifying the level of ERM practices in Sri Lankan insurance industry & its' effect towards performance and therefore level of ERM practices and its impact on firm performance is not known.

In the global insurance industry, technology is rapidly transforming. The number of blockchain applications for fraud prevention, improve efficiency through process simplification, smart underwriting & digital-first policy administration, record keeping, automated codified payouts etc. will reshape the insurance landscape completely. Insurers increasingly invest in data analytics and initiatives to influence behaviors and costs of health providers. Cyber insurance has emerged as a response to growing number of data breaches worldwide which perceived as one of the leading risks to businesses. At the same time in Sri Lanka, the contribution of insurance towards country's total GDP remains low as 1.26% (2017: 1.24 %) continuously. So, it may vital to investigate level of adoption of ERM practices and identifying the impact of those towards performance of insurance companies. Because, identification of level of adoption/ way of adoption of ERM practices can be a vital factor to policy makers in case of taking decisions to improve the insurance industry. Therefore, findings of this study will be useful to insurance companies, general public, students and the interested parties of insurance industry as it will offer valuable contributions from both a theoretical and practical perspective.

Theoretically, findings of this study will contribute to the existing literature on risk management practices and their effect on financial performance. Specially, this study will enable Insurance companies in Sri Lanka to improve their ERM practices and to adopt efficient strategies to improve firm financial performance through the implementing proper ERM practices. Findings of this study will be helpful to the insurance companies to perform better and to grow their businesses and achieve competitive advantages.

Other than insurance companies, the general public will benefit from the study through improved insurance services and better management of risks. Improvements of insurance industry will result to affordable rates of insurance premiums and reduction in levels of non-payment and fraud. Further, this study will be helpful to the government in setting regulations on insurance practices in Sri Lanka. Since this study adds to the existing body of knowledge on risk management, it will be an encouragement to academics and this will aid further researches on risk management in the insurance sector and the financial sector.

Literature Review and hypotheses development

Risk refers to common business issue and it is always a topic, full of ambiguity and complexity. The understanding and awareness about risk and sophistication of risk management techniques have been increased remarkably in the recent few years (Bernstein, 2000). Meulbroek (2002) has mentioned that the goal of risk management is not minimizing the total belongs to a firm, but to choose the optimal level of risk to maximize shareholder value.

The professional status of risk management as a mainstream business discipline (e.g., accounting, marketing, strategy, etc) has yet to evolve. According to Dickinson (2001), the evolution of Enterprise Risk Management (ERM) has emerged not only as a concept but also as a management function. Traditional risk management separates risk categories into so-called risk-silos (Liebenberg et al, 2003). This means that there are different risk types as market, credit, liquidity and operational risks and those are managed separately. The downside of this method is that because of the splitting up of the risks, every risk needs to be managed individually, leading to inefficiencies in risk management. According to Walker et al., (2003) ERM as an integrated and a disciplined method which exists in organizations and facilitates systematic managing of firm related risks in an organization and helps in achieving the objectives of an enterprise.

The most of the existing literature on ERM is concentrated mainly on entities in the developed economies; however, the concept of ERM is generally applicable to most companies both in developed and emerging markets. Emerging markets generate higher rates of return on capital than developed markets and are characterized by high rates of volatility and are more susceptible to the external impact including regulatory and operational (Fuss,2002) .Arena et al. (2011) have analyzed different ERM models available in the literature and have concluded that there are two characteristics that are distinguishing traditional approaches to risk management and ERM as, 1. Comprehensiveness which means that ERM should cover different risk categories and is related to the range of risks that are considered 2. Integration that is related to the fact that ERM systems should span all lines of business, functional areas and their reciprocal influence, i.e. governance of risks within all levels and functions of the company.

The Committee of Sponsoring Organizations of the Treadway Commission (COSO) has issued its long-awaited Enterprise Risk Management - Integrated Framework, as well as a detailed practical application guide, and key components and risk-management principles which can be used by any type of organization regardless of size. The COSO Enterprise Risk Management framework provides a strong base of ERM (Moeller, 2007). COSO ERM framework designed to offer organizations a commonly accepted model for evaluating risk management efforts, the framework expands on internal control concepts by providing a more robust focus based on the ERM. The framework concentrates on eight interrelated components as internal environment, objective setting, event

identification, risk assessment, risk response, control activities, information and communication, and monitoring.



(Source: COSO Report, 2004)

Figure 1: COSO and ERM Framework

Many studies have evaluated the COSO ERM framework as a whole/ components of COSO ERM framework. In Sri Lankan context, Alawaththegama (2018) have found that except for communication and monitoring, the adoption of ERM has no significant impact on firm performance in the case of diversified listed companies. And the same researcher (Alawaththegama,2017) has tested the impact of ERM practices of performance in the banking industry and has concluded that none of the ERM functions suggested by the COSO ERM framework has a significant impact of the performance.

In foreign context also, many researchers have been tested the relationship between ERM as a full framework/ element/s of the framework and performances of business entities. Ibrahim et al. (2015) have assert that the internal environment has a significant on organization performances. Furthermore, Kinyua et al. (2015) also have recognized that there is a significant relationship between internal control environment and financial performance. And also, Liebenberg et al. (2003) has been concluded that having a chief risk officer strengthens the firm's ERM internal environment and adds value to the firm. TEO et al. (2016) have identified that goal setting has an impact on employee

effectiveness and ultimately improves organizational effectiveness, Palanimally et al. (2017) have been found a significant relationship between internal control activities and operational performance. TEO et al. (2016) have concluded that goal setting is playing a role in the relationship depicted in the conceptual model and it has an impact on employee effectiveness and ultimately it contributes to improve organizational effectiveness. According to Hoyt et al. (2011), ERM strategy is normally targeting to reduce volatility by preventing aggregation of risk across different sources. According to Solomon et al. (2012), a company's risk assessment based on of leverage coefficients is required for the predicted behavior analysis for estimating future results. Deloitte et al (2012), has assert that risk assessment is important since it is how enterprises get a handle on how significant each risk is to the achievement of their overall goals. Vollmer (2015) has concluded that an effective risk responding strategy is expected to have a positive impact on firm performance. According to Munene (2013), there is a significant relationship between the internal control system and financial performance. Further, Eniola et al (2016) has concluded that effective internal controls will significantly improve

financial performance. Palanimally (2017) has investigated that the effectiveness of internal control impacted the performance in SMEs. Eikenhout (2015) has stated that the improvement in the information of the organization's risk profile is another potential source of value created by ERM. Whosely (2010), has concluded that using monitoring and evaluation in government to increase transparency, strengthen accountability, and improve performance and monitoring function could be an ongoing process or timely evaluation aiming to decide as to whether further modifications are required for the firm's ERM.

ERM practices are taken place in insurance companies when they commit to management all the important risks and this involves linking risk capital values to the actual risk-taking activities for the insurer to assess the projected and historical performance of its different risk-taking activities in proportion to the economic capital required to support those activities (Standard & poor, 2005). Hau, Gao & Feng (2009) mentioned that ERM system of an insurance business should be accordance with the steps to complete and those steps are, develop an enterprise risk management strategy, the course of the mission is to link strategic objective and linking risk management to ensure the integrity of the identification and awareness of the enterprise insurance companies are facing, constructing the risk management infrastructure and gradually formed an enterprise risk management environment. Hoyt et al (2011) have measured the effect of ERM on Tobin's Q, a standard proxy for firm value in U.S insurance businesses and find a positive relation between firm value and the use of ERM and according to that study the ERM premium of roughly 20 percent is statistically and economically significant.

Based on the past literature, the researchers developed and tested the following hypothesis to test in achieving research objectives. According to the COSO report, the internal environment refers to the management attitude and the awareness about the importance and the relevance of ERM. The results of a study of Ibrahim et al. (2015) has assert that business environment has a significant impact on organization performance and it has been revealed that business environment has implication for organization performance. Furthermore, Kinyua et al. (2015) also have recognized that there is a significant relationship between the internal control environment and financial performance. And also, Liebenberg et al. (2003) has been concluded that having a chief risk officer strengthens the firm's ERM internal environment and adds value to the firm. Based on these, the researchers have been developed H1 as follows.

H1: ERM supportive internal environment has a positive impact on Performance of the insurance companies of Sri Lanka

H1a: ERM supportive internal environment has a positive impact on ROA of the insurance companies of Sri Lanka

H1b: ERM supportive internal environment has a positive impact on Tobin's Q value of the insurance companies of Sri Lanka

The COSO (2014) has disclosed that a firm's objectives should be aligned within the firm's risk appetite and risk tolerance levels. TEO et al. (2016) have concluded that goal setting is playing a role in the relationship depicted in the conceptual model and it has an impact on employee effectiveness and ultimately it contributes to improve organizational effectiveness. Many ERM frameworks like COSO, ISO 31000 disclose that risk should be identified concerning the firm's objectives (Gates et al. 2013). According to Hoyt et al. (2011), ERM strategy is normally targeting to reduce volatility by preventing aggregation of risk across different sources. That means if management set objectives by considering the risk performances can be increased. Based on these, the researchers have been developed H2 as follows.

H2: Risk aligned objective setting has a positive impact on Performance of the insurance companies of Sri Lanka

H2a: Risk aligned objective setting has a positive impact on ROA of the insurance companies of Sri Lanka

H2b: Risk aligned objective setting has a positive impact on Tobin's Q value of the insurance companies of Sri Lanka

Lots of events are happened because of changing the environment and that may impact either favorably or unfavorably in case of achieving firms' objectives. Most of the external environmental changes create threats or opportunities for firms that effect the risk exposure of firms. So, event identification becomes crucial in the case of every type of business firm. According to Beasley et al. (2008), minimizing business surprises will minimize volatility in return and will improve the firm value and Kiprop et al., (2017) has found that there is a positive relationship between risk identification and performance of financial institutions. Based on these, researchers have developed H3 as follows.

H3: Event identification has a positive impact on Performance of the insurance companies of Sri Lanka

H3: Event identification has a positive impact on ROA of the insurance companies of Sri Lanka

H3: Event identification has a positive impact on Tobin's Q value of the insurance companies of Sri Lanka

Events that will not impact positively or negatively if the likelihood of occurring is relatively very low. So, in case of developing risk responding strategy, management needs to assess the possibility of risky events. According to Solomon et al. (2012), a company's risk assessment based on of leverage coefficients is required for the predicted behavior analysis for estimating future results. Deloitte et al (2012), has assert that risk assessment is important since it is how enterprises get a handle on how significant each risk is to the achievement of their overall goals. Based on the above discussion, it is hypothesized:

H4: Risk assessment has a positive impact on Performance of the insurance companies of Sri Lanka

H4a: Risk assessment has a positive impact on ROA of the insurance companies of Sri Lanka

H4b: Risk assessment has a positive impact on Tobin's Q of the insurance companies of Sri Lanka

Management should decide suitable strategies such as risk avoidance, risk sharing, risk acceptance and risk reduction based on risk assessment and in the case of firms' risk tolerance and risk appetite. Vollmer (2015) has concluded that an effective risk responding strategy is expected to have a positive impact on firm performance. Based on this, researchers have developed H5 as follows.

H5: Risk response has a positive impact on Performance of the insurance companies of Sri Lanka

H5a: Risk response has a positive impact on ROA of the insurance companies of Sri Lanka

H5b: Risk response has a positive impact on Tobin's Q value of the insurance companies of Sri Lanka

Development & implementation of a sound internal control system, enhance effectiveness and the efficiency of operations of the firms. Internal controls ensure that the operations are performed according to plans. According to Munene (2013), there is a significant relationship between the internal control system and financial performance. Further, Eniola et al (2016) has concluded that effective internal controls will significantly improve financial performance. Palanimally (2017) has investigated that the effectiveness of internal control impacted the performance in SMEs. Control activities are powered by the firm's internal control functions, which enhances the efficiency and effectiveness of the operations affecting positively on the firms' performance. Based on the discussion, H6 developed as:

H6: Control activities has a positive impact on Performance of the insurance companies of Sri Lanka

H6a: Control activities has a positive impact on ROA of the insurance companies of Sri Lanka

H6b: Control activities has a positive impact on Tobin's Q value of the insurance companies of Sri Lanka

The integrated risk management is appraised over traditional silo-based risk management owing to its integration of risk information and communication channel is vital to achieving the intended benefits of an integrated risk management framework and it can only be achieved by ensuring effective integration of information across the firm. Eikenhout (2015) has stated that the improvement in the information of the organization's risk profile is another potential source of value created by ERM. Further, Alawaththegama (2018) has found that information and communication have a positive and statistically significant impact on return on equity. Based on the facts, the researchers have developed H7 as follows.

H7: Information and communication of risk information has a positive impact on Performance of the insurance companies of Sri Lanka

H7a: Information and communication of risk information has a positive impact on ROA of the insurance companies of Sri Lanka

H7b: Information and communication of risk information has a positive impact on Tobin's Q value of the insurance companies of Sri Lanka

Overall ERM functions are required to be closely supervised and monitored in case of gaining advantages of ERM systems. Prior researchers (Whosely, 2010; Mutinda et al., 2015) have noted the importance of having good monitoring in case of better organizational performances. As an example, Whosely (2010), has concluded that using monitoring and evaluation in government to increase transparency, strengthen accountability, and improve performance and monitoring function could be an ongoing process or timely evaluation aiming to decide as to whether further modifications are required for the firm's ERM. Based on the discussion, it is hypothesized:

H8: Monitoring of ERM functions has a positive impact on Performance of the insurance companies of Sri Lanka

H8a: Monitoring of ERM functions has a positive impact on ROA of the insurance companies of Sri Lanka

H8b: Monitoring of ERM functions has a positive impact on Tobin's Q of the insurance companies of Sri Lanka

Methodology

The through literature review and conceptualization of the variables recognized the below objectives of the study;

- To identify the level of Enterprise Risk Management (ERM) practices which are practicing in Sri Lankan insurance companies.
- To identify the impact of Enterprise Risk Management (ERM) practices on performances in Sri Lankan insurance companies.

The literature review and the research objectives forced to develop the below research questions;

- Up to what extent Enterprise Risk Management (ERM) practices are practicing in insurance companies of Sri Lanka?
- How do Enterprise Risk Management (ERM) practices impact on performances of insurance companies of Sri Lanka?

Based on the components & the guidelines of the COSO framework, researchers have developed following conceptual framework.

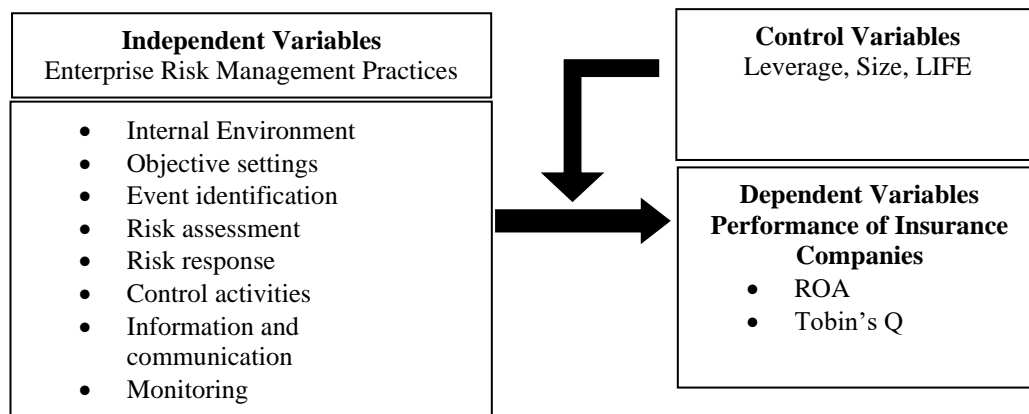


Figure 2 – The Conceptual Model

Source - COSO New ERM Framework and past literatures

In this study the researchers have tested, whether the eight components of the COSO model are functioning well or not in the insurance industry of Sri Lanka and assessed the impact and the relationships of those towards performance of insurance companies. The researchers used dimensions of these components which have been described in the COSO model have been selected to measure the effectiveness of the ERM practices of insurance companies.

Eight components of the COSO model (ERM practices) are the independent variables and the dependent variable is the performances of insurance companies. Researchers have selected ROA and Tobin's Q as the proxies to measure performance of insurance companies. ROA helps to measure how management is using its assets or resources to generate more income. Furthermore, in case of many studies related to insurance industry stated return on assets (ROA) as the key indicator of a firm's performance/ profitability return on assets (ROA), defined as before tax profits divided by total assets (Tangen, 2003; Malik, 2011; Ali et al., 2011; Almajali, 2012; Charumathi, 2012; Bilal et al., 2013).

Tobin's Q is often used a variable to examine firm value (Smithson & Simkins, 2005; Hoyt & Liebenberg, 2011; Quon, Zéghal & Maingot, 2012). An advantage of using Tobin's Q when measuring firm value is that it reflects market expectations and therefore is relatively free of managerial manipulations. Tobin's Q will be calculated as the market value of equity plus the book value of liabilities divided by the book value of assets. This formula is widely used for Tobin's Q as seen in multiple studies in different fields (Allen & Rai, 1996; Palia, 2001; Cummins, Lewis & Wei, 2006; Elango, Ma & Pope, 2008; Hoyt & Liebenberg, 2011).

Table 1, Table 2 and Table 3 express the operationalizations in case of independent variables (Components of COSO ERM framework), dependent variables (ROA & Tobin's Q- Performance of insurance companies) and control variables (Firm size, Leverage, LIFE) respectively.

Table 1 Operationalization- Independent variables

Dimensions	Indicators	Statement	Measurement
Internal Environment	Effectiveness of organizational structure	The organization views risk management as a means of preserving and creating value.	Five-point Likert scale
	Management's effectiveness and competence	The board of directors is supportive of management's efforts to implement entity wide ERM system	
	Management philosophy and operating style	The board considers risk management a regular part of its oversight agenda.	

Objective Settings	Setting corporate strategy, overall direction, mission and vision	The organization defines goals and objectives for the enterprise as a whole	Five-point Likert scale
	Specifying achievable objectives	Strategies are clearly articulated and linked to objectives of the firm	
	Developing strategies and setting policy guidelines.	The organization follows a risk-based approach in strategic planning	
Event Identification	Setting Event inventories	Data on the business environment (PESTEL events) is captured and regularly evaluated in terms of their potential impact upon the organization's objectives	Five-point Likert scale
	Escalation or threshold triggers	Organization has prepared a portfolio of events that could affect the achievement of objectives.	
	Leading event indicators	Responsibilities and accountability for risk identification are clearly defined and understood.	
Risk Assessment	Setting objectives	Risk is assessed in terms of both inherent and residual risk	Five-point Likert scale
	Analyzing related risks	Key risks are assessed within a standard framework considering their likelihood of happening and impact on performance	
	Managing changes	There is a periodic review process to ensure that the organization's risk assessments are reviewed and updated	
Risk Response	Selection of the most appropriate response(s) to risk.	Full range of available risk management options (avoid, reduce, share, accept) are considered when formulating risk responses	Five-point Likert scale
	Effectiveness of risk response tools that firm used.	When considering alternative responses, management considers the impact of risk significance and likelihood	
	Degree of effective Risk assessment.	Alternative responses are evaluated against costs and benefits	
Control Activities	Business performance reviews	There is an appropriate balance between preventative and detective control measures in place	Five-point Likert scale
	Information processing	Mechanism exists to report the weaknesses in the internal controls and they are addressed immediately	
	Physical control	Control activities are periodically reviewed to ensure their suitability and adequacy for the intended purpose	
Information and Communication	Pertinent information identified, capture and communicated in timely manner.	Appropriate information is gathered from internal and external sources to identify, assess, response and manage risk	Five-point Likert scale
	High level of Access to internal and externally generated information.	Organization has adequate information and infrastructure to identify, capture and analyze and to communicate risk information	
	Identify and document the significant processes for key areas.	Critical risk information is reported to the board and senior management in a periodically or immediately according to the risk policy	

Monitoring	Assessment of control system's performance over time.	The required information is available to allow for proper monitoring of risk throughout the company	Five-point Likert scale
	Combination of ongoing and separate evaluation	The organization has developed and monitors critical risk indicators that are significant for its survival	
	Proper Internal audit activities.	The organization has developed and monitors critical risk indicators that signal something is going wrong with the business processes	

The operationalization for the independent variables has been developed by the researcher based on the guidance which have been given in the COSO report.

Table 2 - Operationalization- Dependent Variables

Dimensions	Indicators	Measurement
ROA	Return – Net Profit before tax Total Assets	Return/ Total Assets *100
Tobin's Q	Market value of assets Book value of liability Book value of assets	(Market value of equity+ Book value of liability)/ Book value of Assets

Table 1 Operationalization- Control Variables

Dimensions	Indicators	Measurement
Leverage	Total Debt Total Equity- (Assets – Liabilities)	Total Debt/ Total Equity
Firm size	Natural log of the total assets	Secondary data
LIFE	Dummy variable, Life insurance or not	Life insurance- 01 General insurance- 00

According to the statistical review (2018) of insurance regulatory commission of Sri Lanka, Sri Lankan insurance industry in 2018 operated with twenty-six registered insurance companies. According to Research Advisor's sample adequacy table (<https://www.research-advisors.com/tools/SampleSize.htm>), a sample of 230 responses is a reasonably representative sample of a population of 1111 employees. As sampling technique researcher used stratified random sampling technique and issued minimum 10 questionnaires for executives from different sections per company and covered all 26 active insurance companies in Sri Lanka. This survey questionnaire has been developed by considering the prior research works of Alawaththegama (2018), Beasley et al. (2005), Gates et al. (2012), Njagi (2015), Altermeyer (2004). The independent variables, uses a five-scale questionnaire that lets the respondents to choose between, "strongly disagree," "disagree," "neutral," "agree" and "strongly agree" on the level of adoption of ERM functions that best fit for their firm. If the respondent strongly disagrees with the statement relating to the particular ERM function a numerical value of "1" is assigned and if strongly agree with the stated risk management practice a numerical score of "5" is assigned. Data collected through top level managers/ internal auditors/ accountants who deal with / aware about risk management practices in insurance companies. Researcher has received total 236 responses from the executive level employees who represents all active insurance companies (26 companies) in Sri Lankan insurance industry. At least 8 responses have received from each of the companies. (Issued: 726 Questionnaires, Received: 236 responses). The following decision criteria (mean testing) has been adopted from Hair et al. (2006) to identify the level of risk management practices in Sri Lankan insurance companies. Same method has been

used by Thushyanthi et al. (2017) in case of measuring degree of service quality and Abeyrathna et al. (2016) to measure level of financial risk management practices in SMEs.

Table 4: Decision criteria

Mean Value Decision	Decision
1.0-2.49	Low level
2.5-3.49	Moderate level
3.5-5.0	High level

Furthermore, Alawaththegama (2018) have used correlation analysis and multiple regression analysis in a same type of study. Based on that, correlation analysis will be used by the researcher to determine association of each ERM dimensions with business performance of insurance companies and in order to test the impact of the eight ERM functions of the COSO's ERM framework, on the firm performance and to assess the relationship between the adoption of the ERM practices and the firm performance, this study adopts following multiple regression models.

$$1) \text{ ROA} = \beta_0 + \beta_{11E} + \beta_{2OS} + \beta_{3EI} + \beta_{4RA} + \beta_{5RR} + \beta_{6CA} + \beta_{7IC} + \beta_{8M} + \beta_{9L} + \beta_{10FS} + \beta_{11L} + \varepsilon$$

$$2) \text{ Tobin's Q} = \beta_0 + \beta_{11E} + \beta_{2OS} + \beta_{3EI} + \beta_{4RA} + \beta_{5RR} + \beta_{6CA} + \beta_{7IC} + \beta_{8M} + \beta_{9L} + \beta_{10FS} + \beta_{11L} + \varepsilon$$

Where,

ROA = Return on Assets; O= Other Factors; IE = Internal Environment; OS = Objective Setting; EI = Event Identification; RA = Risk Assessment; RR = Risk Response; CA = Control Activities; IC= Information and Communication; M= Monitoring; L= Leverage; FS= Firm size; L= LIFE

Data analysis, results and findings

Researchers have received total 236 responses from the executive level employees who represents all active insurance companies (26 companies) in Sri Lankan insurance industry. At least 8 responses have received from each of the companies. According to the analysis most of the respondents are bachelor degree holders, as a percentage it is 32%. 24% of them are having MBA or equal qualifications and 24% of them are having professional qualifications such as ACCA, CA, CFA, CMA, CIMA. 13% of them are higher diploma holders and 7% are having other qualifications.

In addition to the primary data, researchers have collected secondary data from 26 companies for measuring the performance (ROA & Tobin's Q) of the insurance companies from annual reports & industrial statistical reviews. Below table 5 presents the descriptive statistics with respect to the collected data.

Table 5 - Descriptive statistics

Variables	Minimum	Maximum	Mean	Std. Deviation
IE	2.10	5.00	3.5535	.95307
OS	1.90	5.00	3.6581	1.13454
EI	2.33	5.00	3.3360	1.06741
RA	1.90	5.00	3.5085	1.04068
RR	2.10	5.00	3.4120	.88311
CA	2.33	5.00	3.4958	.97796
IC	2.33	5.00	3.5156	1.04408
M	2.10	5.00	3.4096	.87817
ROA	-.225	.448	.072	.11824592
Tobin's Q	.01	2.65	1.882	.86191

Table 6, shows the final output of mean testing (related to the independent variables) based of the responses received from the executive level employees of Sri Lankan insurance companies in case of measuring the level of ERM practices which are implemented in Sri Lankan insurance companies. According to the decision criteria, three components namely, Internal Environment, Objective setting and Risk Assessment are showing high level of practicing. In case of other five components are showing moderate level of practicing.

Table 6 - Mean Testing (Adopting the decision criteria)

Components of COSO ERM framework	Mean Value	Practicing level according to the criteria
Internal Environment	3.56	High Level
Objective setting	3.65	High Level
Event Identification	3.33	Moderate Level
Risk Assessment	3.50	High Level
Risk Response	3.41	Moderate Level
Control Activities	3.45	Moderate Level
Information & Communication	3.46	Moderate Level
Monitoring	3.40	Moderate Level

According to the Pearson correlation analysis summary (see Table 7 below), two independent variables namely, Control Activities and Information & communication are having significant relationship with ROA. At the same time, two independent variables namely, objective setting and Information & communication are having significant relationship with Tobin's Q. Here, both the dependent variables (ROA & Tobin's Q) are having significant relationships with the independent variable named Information & communication. Furthermore, in the case of control variables, leverage and the dummy variable (LIFE) are having significant relationship with ROA while all the three control variables are having significant relationship with Tobin's Q. Leverage and the dummy variable (LIFE) are having significant relationships with both dependent variables.

Table 7 - Pearson Correlation Analysis

Independent & Control Variables		ROA	Tobin's Q
IE	Pearson correlation	-.097	-.128
	Sig. (2 tailed)	.136	.550
OS	Pearson correlation	.119	.151*
	Sig. (2 tailed)	.069	.021
EI	Pearson correlation	.002	.016
	Sig. (2 tailed)	.974	.810
RA	Pearson correlation	.039	.076
	Sig. (2 tailed)	.548	.247
RR	Pearson correlation	.078	.026
	Sig. (2 tailed)	.234	.691
CA	Pearson correlation	.436**	.090
	Sig. (2 tailed)	.000	.167
IC	Pearson correlation	.413**	.440*
	Sig. (2 tailed)	.000	.050
M	Pearson correlation	.135	.008
	Sig. (2 tailed)	.078	.906
Leverage	Pearson correlation	.180**	.535**
	Sig. (2 tailed)	.005	.000
Firm size	Pearson correlation	.058	.140*
	Sig. (2 tailed)	.376	.032
Life	Pearson correlation	-.194**	-.528**
	Sig. (2 tailed)	.003	.000
*95% confidential level, **99% confidential level			

A multiple regression analysis was conducted by the researchers to test the impact of the independent variables (ERM practices) on the dependent variables (financial performance- ROA & Tobin's Q) of insurance companies in Sri Lanka.

Table 8 Model summaries

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.754 ^a	.515	.476	.10383533
2	.712 ^a	.507	.482	.84274
Predictors: Constant, M, CA, RA, IE, EI, OS, RR, IC, LIFE, Firm Size, Leverage				

R Square explains the extent to which changes in the dependent variable can be explained by changes in the independent & control variables. According to table 8, R² of model 1 is 0.515 which implies that the eight independent variables and three control variables (M, CA, RA, IE, EI, OS, RR, IC, LIFE, Firm Size, and Leverage) explain 51.5% of the variations in performance of insurance companies in Sri Lanka when considering ROA as the proxy of measuring performance of insurance companies. Same time, R² of model 2 is 0.507 and that indicates, the eight independent variables and three control variables explain 50.7% of the variations in performance of insurance companies in Sri Lanka when considering Tobin's Q as the proxy of measuring performance of insurance companies.

According to the below table 9, the significance values are 0.000 & 0.019 in two models respectively and both are less than 0.05. Thus, these two models are statistically significant in predicting how ERM practices affect the financial performance of insurance companies in Sri Lanka.

Table 9 - ANOVA results of two models

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.838	8	.105	9.719	.000 ^b
	Residual	2.447	227	.011		
	Total	3.286	235			
a. Dependent Variable: ROA						
b. Predictors: (Constant), M, CA, RA, IE, EI, OS, RR, IC						

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	13.359	8	1.670	2.351	.019 ^b
	Residual	161.218	227	.710		
	Total	174.577	235			
a. Dependent Variable: Tobins_Q						
b. Predictors: (Constant), M, CA, RA, IE, EI, OS, RR, IC						

The direction and the strength of the linear relationship between the independent and dependent variable is measured by the Pearson's correlation (Bruin, 2006). Nevertheless, it fails to assess the impact on the dependent variable in the presence of other variables. The causal relationships between each ERM function along with the presence of other ERM functions are assessed by the regression model. In order to assess the causal impact of the adoption of ERM functions on the firm performance, the researchers need to assess the regression result by testing the hypothesis.

Table 10 - Coefficients -Model 1

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.028	.036		.755	.451
IE	.002	.013	.012	.120	.905
OS	.018	.011	.175	1.688	.093
EI	.010	.011	.089	.922	.358
RA	.017	.013	.151	1.297	.196
RR	.008	.014	.062	.576	.565
CA	.033	.016	.274	2.034	.043
IC	.024	.015	.212	1.556	.021
M	.027	.011	.202	2.397	.017

a. Dependent Variable: ROA

According to table 10, only P values related to the variables of control activities (CA), information & communication (IC) and monitoring are less than 0.05. Further, coefficient values relate to both variables (CA, IC, M) are also positive (0.033, 0.024 & 0.027 respectively). That means researchers are having enough statistical evidences to accept H6a, H7a & H8a. All other hypotheses related to model 01 (H1a, H2a, H3a, H4a, H5a) have to be rejected.

Table 11 below shows the coefficient values related to model 02. According to the table, Just the P value related to the variable of control activities is less than 0.05. And, since it is having positive coefficient value too, researcher is having enough evidences to accept H6b. All other hypotheses related to model 02 (H1b, H2b, H3b, H4b, H5b, H7b, H8b) have to be rejected.

Table 11 - Coefficients - Model 2

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.957	.296		.730	.001
IE	.204	.103	.225	.978	.449
OS	.160	.088	.211	.828	.069
EI	.164	.087	.203	.888	.060
RA	.017	.107	.021	.163	.871
RR	.056	.118	.057	.473	.637
CA	.172	.132	.195	1.301	.045
IC	.114	.125	.138	.913	.362
M	.137	.092	.139	1.481	.140

a. Dependent Variable: Tobins_Q

Discussion & Recommendations

The first objective of this study is to identify the level of Enterprise Management Practices in Sri Lankan insurance industry. In achieving that objective, researchers performed mean testing and used a decision criterion which has adopted by prior researchers in different type of studies. According to the results of the mean testing, three components of COSO ERM framework namely, Internal

Environment, Objective setting and Risk Assessment are showing a high level of practicing and in case of other five components are showing a moderate level of practicing. That means, when it becomes a common view Sri Lankan Insurance companies are practicing a reasonable level of ERM practices. When reviewing the related literature, it can be noted that some researchers have introduced some models in measuring the degree of ERM practicing. As an example, Aon (2010) has developed a five-stage ERM maturity model (see below table 12).

Table 12 - ERM Maturity model

Scale		
1	Initial/lacking	Component and associated activities are very limited in scope and many be implemented on an ad-hoc basis
2	Basic	Limited capabilities to identify, assess, manage and monitor risks
3	Defined	Sufficient capabilities to identify, measure, manage, report and monitor major risks; policies and technique are defined and utilized (perhaps independently) across the organization
4	Operational	Consistent ability to identify, measure, manage, report and monitor risks, consistent application of policies and techniques across the organization
5	Advanced	Well-developed ability to identify, measure, manage and monitor risks across the organization; process is dynamic and able to adapt to changing risks and varying business cycles; explicit consideration of risks and risk management in management decisions

In Sri Lankan insurance industry, the researchers have identified all components of the COSO ERM framework are practicing at high/ moderate levels. Based on this fact, it is reasonable to accept Sri Lankan insurance companies have passed at least first 3 scales of the ERM maturity model. This finding could be important to the internal management as well as external stakeholders of the organization to make informed decisions.

The second objective of this study is to identify the impact of Enterprise Risk Management (ERM) practices on performances of Sri Lankan insurance companies. In achieving this objective, researchers have chosen two main statistical tools, correlation analysis and the regression analysis. Here, the researchers performed correlation analysis to get an understanding about the direction and the strength of the linear relationship between the components of COSO ERM framework and performance of Sri Lankan insurance companies (ROA & Tobin's Q). And in order to assess the causal impact of the adoption of ERM functions on the firm performance, the researchers used the regression result to test the hypothesis.

In correlation analysis, two independent variables namely, control environment and Information & communication indicate significant relationships with ROA. At the same time, two independent variables namely, objective setting and Information & communication are having a significant relationship with Tobin's Q. Here, both the dependent variables (ROA & Tobin's Q) are having significant relationships with the independent variable named Information & communication. In hypotheses testing, H6 was fully accepted and H7 & H8 were partially accepted. It refers that Control activities, Information & communication and monitoring are the most crucial variables which are having the positive impact on the performance of the insurance industry.

Literature shows more powerful statistical evidences to prove that ERM has a positive and significant impact on the firm performance and the extent of the adoption of ERM has a positive and significant relationship with firm value have greatly relied upon dummy variables. As examples, Liebenberg and Hoyt, 2003; Beasley Clune and Hermanson, 2005 have presumed that the presence of certain indicator variables such as the presence of CRO, risk committee, internal audit committee and big four audit firms as positive indicators of high adoption of ERM by business firms. And it has been criticized by some scholars claiming nominal variables cannot reliably measure the extent of ERM

adoption by a firm and Hoyt, Moore and Liebenberg (2008), suggest the researchers are required to find more robust models for assessing the extent of ERM implementation. So, this methodological gap can be a reason for this surprise rejection of hypotheses.

And some prior studies in Sri Lankan context (for example, Alawattagama, 2018; Alawattagama, 2017) which have been followed the same methodology have showing same type of result, just showing the significant impact from one or two independent variables towards performance. However, some same type of studies from developed countries are showing more powerful statistical evidences in case of proving positive impact of ERM practicing. As an example, Altanashat et al, (2019) found that seven out of the eight components (Other than objective setting all other components are significant) of framework suggested by the COSO's ERM integrated framework has a significant impact on institutional performance in case of Jordanian public shareholding companies. And in a same type of study which conducted in constructions companies in Gaza strip Iskandar M. (2018) has noted that there is a statistically significant positive effect for each of the elements of the model on the operational performance. Therefore, it can be concluded that studies which have conducted in companies in developed countries show more evidences to prove the positive impact of ERM practices towards performances.

These results imply that the expected value addition from the ERM practices have not been achieved by the Sri Lankan insurance companies yet. However, up to now three components Control activities, Information & communication and monitoring are showing positive impact towards performance. So, the management of the companies have to think about strategies to convert the components of ERM model to create value to their organizations by way of improving performance.

The findings of this study will be helpful to Insurance companies in Sri Lanka to improve their ERM practices and to adopt efficient strategies to improve firm financial performance through the implementing proper ERM practices. Findings of this study will be helpful to the insurance companies to perform better and to grow their businesses and achieve competitive advantages.

As researcher identified, Control activities, Information & communication and monitoring are the most crucial components of ERM framework which are having positive impact on performance of insurance industry in Sri Lanka, management can put their more attention on these-three components and there is a high probability of having better results in short run. Because, results of this study are showing that there is a positive impact from these three components towards performance of insurance industry. Other than insurance companies, the general public will benefit from the study through improved insurance services and better management of risks. Improvements of insurance industry will result to affordable rates of insurance premiums and reduction in levels of non-payment and fraud. Further, this study will be helpful to the government in setting regulations on insurance practices in Sri Lanka. Lastly, since this study adds to the existing body of knowledge on risk management, it will be benefited to academicians and this will aid further researches on risk management in the insurance sector and the financial sector.

According to literature, most of the prior studies have greatly relied upon dummy variables. As examples, Liebenberg and Hoyt, 2003; Beasley Clune and Hermanson, 2005; have presumed that the presence of certain indicator variables such as the presence of Chief Risk Officer, risk committee, internal audit committee and big four audit firms as a positive indicator of high adoption of ERM by business firms. And it has been criticized by some scholars claiming nominal variables cannot reliably measure the extent of ERM adoption by a firm and Hoyt Moore and Liebenberg (2008), suggest the researchers are required to find more robust models for assessing the extent of ERM implementation. In this study, the researchers has not depended on those dummy variables and researchers have developed comprehensive operationalization based on COSO model in measuring ERM practices. So, future researchers can touch different industries, different type of firms in evaluating the adoption of ERM practices using same method which followed by these researchers.

The limitations of this study could be consideration of the views of only executive level employees and limitation of the scope to insurance industry in Sri Lanka.

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An Examination of Herd Behaviour: Evidence from Colombo Stock Exchange

Abeysekera, S. M.¹, Wijesinghe, D. C.² and Weligamage, S. S.³

Traditional Finance theory presumed that equity market participants take decisions based on rational platforms. However, recent market incidents witnessed investors' decision making process is fueled with irrational behaviour like herding. Herding behaviour is a dominated behavioural biases which depict investors take decisions based on imitating other investors' behavior. The lack of research regarding herding, done in emerging markets especially in Sri Lankan context and the inconclusive results of the studies undertaken, were the key motives for this study. Hence, this study attempts to examine the herding behaviour among investors in Colombo Stock Exchange (CSE) and to identify herding among Bull and Bear market phrases. The daily share return of 20 companies in S&P 20 index from 2007 to 2018 were taken for the study and All Share Price Index is used as the proxy for market returns. The model, Cross Sectional Absolute Deviation (CSAD) and Cross Sectional Standard Deviation (CSSD) were used to detect market-wide herding. Results obtained fail to find any evidence regarding Herding in Colombo Stock Exchange during the Period of Study. Significant but positive coefficient values attached to CSAD method implied the absence of Herding in overall market as well as bull and bear phrases. CSSD method further implied the absence of Herding behaviour during the period of study. Further, this study reflects investors in CSE purely look at risk return properties of individual counters rather than following other investors behaviour. It reflects majority of investors in CSE purely take decisions based on rational analysis of price sensitive risk return information rather than based on irrational behavior like herding. Lacking the behavioral biases like herding among the capital market participants transmit a message to regulators and policy makers to develop sound capital market infrastructure based on rational finance theories. Investors should rely on logical information to avoid being bias before taking their investment actions.

Keywords: *Behavioral bias, Cross Sectional Standard Deviation, Cross Sectional Absolute Deviation, Colombo Stock Exchange, Herding Behaviour*

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¹ Department of Finance, University of Kelaniya, Sri Lanka (shyenuabe95@gmail.com)

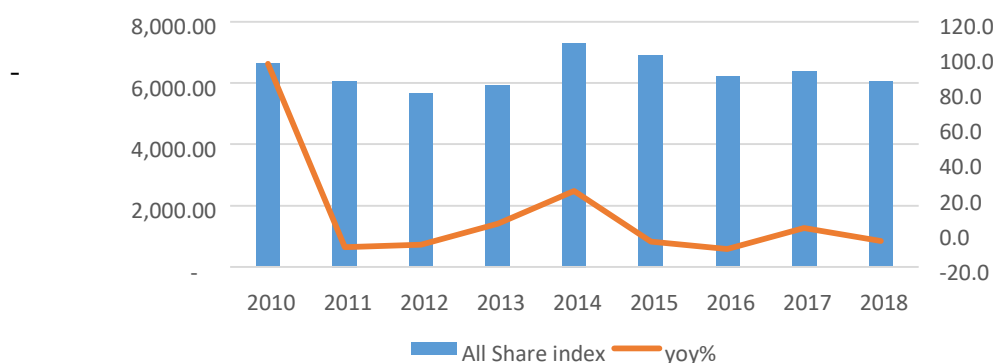
² Department of Finance, University of Kelaniya, Sri Lanka (dimuthucharaka92@gmail.com)

³ Department of Finance, University of Kelaniya, Sri Lanka (susima@kln.ac.lk)

Introduction

Colombo Stock Exchange (CSE) market serves as a key catalyst in the country's growth story. At the end of the war by the majority of Sri Lankans, Government and by the international community widely welcomed and generated surge of expectation about the economic prospects for Sri Lanka and with high expectation that Sri Lanka would embark a sustainable growth period in near future. During this key transitional stage Central Bank of Sri Lanka (CBSL) has predicted that Sri Lanka will be ending up in "Upper Middle Income" category during the next couple of year. In 2015 CBSL has forecasted that Sri Lanka will generate USD 4704 in 2018, by assuring the status up gradation from middle income to upper middle income. Confirming those forecasts, Sri Lanka has moved to the "Upper- Middle Income" category in 2018 according to World Bank data. Gross National Income per capita has increased from USD 3840 in 2017 to USD 4060 in 2018.

Colombo Stock Exchange (CSE) is a key factor that capture the growth story of the country. After the end of the civil war on 18 May 2009, CSE indexes recorded a remarkable increase creating new records. Market capitalization at the Colombo Stock Exchange reached the Rs.1 trillion mark for the first time in Sri Lankan history and it was the best performing stock exchange in the world in 2009, according to World Federation of Exchanges. It was recognized as a record breaking year in CSE. Therefore, it is providing evidences, that investment decisions of investors are largely based on political and economic environment of the country.



Source: CSE performance

Figure 1- Colombo Stock Exchange All Share Price Index behaviour (2010-2018)

Herding behaviour is one of the leading irrational behavioural bias which explain that investors are imitating other investment behaviours rather than base on their own process of information. In the other word, herding means, investors blindly following or imitating the overall market direction believing that overall population is taking the correct decision. Herding concept is not only related to stock exchange and investments decisions, but also it can observe in all movements of peoples' decision making process. In Sri Lankan context there is a huge gap in availability of literature and knowledge about Behavioral Finance theories including herd behavior. Herd behavior is regarded as an emotional bias and it can be treated as an alternative way that investors use to make their investment decisions. Therefore, this research article tries to bridge the gap available in market, by focusing herding based factors of investors in Sri Lanka and to understand about investors' decisions, it is important to examine whether behavioral factors like herding, influence the decisions of investors in CSE. The main research problem in this study is "Do herding exist in CSE?" Hence, the main and the basic objective of this research is to detect and identify the presence of herding

behaviour of investors in Sri Lanka by taking evidences from Colombo Stock Exchange (CSE). In addition to that study focuses to identify herding behaviour in bull and bear market phases.

Literature Review

Numerous studies have defined herding behaviour in financial markets, however ultimately all the studies reflect the idea of individuals taking their decisions not based on their own private information and they rely on information which is commonly known by everyone. Prospect theory explains how the investors make decisions based on the probabilistic alternatives, when the probable outcome of investment decision is known (Kahneman and Tversky, 1979).

Nair and Antony (2015) view that behavioural finance as not a replacement to classical or traditional finance theories, but as means to understand the irrational investor behaviour and reasons for sudden rise and fall in the market. Marchand (2012) identifies that the irrationality exists in the human behaviour in the form of biases and it compares the traditional and modern finance theories with the behavioural finance theories. There are number of studies and literatures that are been done relating to herding behaviour and out of those studies some researchers have defined herding behaviour in financial markets.

Haritha & Uchil (2016) documented that herding means similar thinking among individuals and further they elaborate if any experienced investor invests in any stock, others will follow the same category of investment. Banerjee (1992) defined as “Everyone doing what everyone is doing even when their information suggests doing somewhat different. Bikchandani & Sharma (2000) identified two types of herding behaviours namely intentional herding and unintentional herding. They have identified imperfect information, Concern for reputation and compensation structures are the basic causes that influence for rational herding. According to Guney, Kallinterakis & Komba, (2017) Investors herd intentionally when they wish to make profit. Scholars have discovered various yardsticks to measure the herding effect in financial markets (Kunte, 2015, Kumar and Goyal, 2014). However, most of the studies are based on cross sectional standard deviation method developed by Christie and Hung (1995). They examine the cross sectional standard deviation (CSSD) around the US equity market in extreme upward market movements and extreme downward market movements. In empirical study, Chang, Cheng and Khorana (2000), further extended the model proposed by Christie and Hung and they utilized Cross Sectional Absolute Deviation (CSAD) methodology for capturing the herding in the market.

Javed, Zafar et al (2013.) examined the presence of herding behaviour in Pakistan Stock exchange and their analysis has revealed that no herding behaviour took place in Karchi Stock Exchange. In 2020 M Kashif, R Palwishah, RR Ahmed, J Vveinhardt, D Streimikiene examined herding behaviour in Pakistan stock exchange by using CH model, CSSD & CSAD models, and State-space model. There were no evidence of herding during the entire sample period, however, supports significant non-linear herding during upper and lower extreme market movements. Le and Truong (2014) examined the herding behaviour in Vietnam Stock Exchange using the security returns in 2006 to 2012 by using CSSD and CSAD and a new method called probability approach. Their study had shown presence of Herding behaviour in Vietnam Stock Exchange and they highlighted it is a common phenomenon in immature markets like Vietnam. However, Bangladesh perspective gives different picture than Vietnam. Ahsan and Sarkar (2013) examined the daily and monthly stock returns in Bangladesh Dakaha stock exchange in period of 2005 to 2011 and they identified Bangladesh depicts that investors in Dakaha stock exchange are rational and make investment decisions based on information available in market place information rather than following the market consensus.

A number of studies can be found regarding herding in different markets. Most of the researches (Christie & Huang, 1995; Chang et al., 2000; Gleason, Mathur, & Peterson, 2004) have rejected the existence hypothesis of the herding behaviour in the US stock market. And Demirer and Kutun, (2006) concluded that the lack of evidence to herding behaviour in the Chinese Stock Market. Chiang and Zheng, (2010) and Khan et al. (2011), have concluded the existence of statistically significant evidence that herding behaviour exists in number of developed European countries. Indárs, E. R., Savin, A., & Lublóy, Á. (2019) found evidence that, investors on the Moscow Exchange herd without any reference to fundamentals during unanticipated financial crises with high uncertainty, in falling markets, and during days with extreme upward oil price movements. Therefore different researches have provided different conclusions regarding existence of herding behaviour. However, only one study can be found in local context using secondary data. Sewwandi (2016) examined the market wide herding in Colombo Stock Exchange by following a Cross Sectional Absolute Deviation (CSAD) method. She identified no herding behaviour taking place in CSE during the period of Study and she further identified no herding behaviour took place in both up and down market movements. Menike, Dunusinghe and Ranasinghe (2015) deployed a contradictory method to CSAD to rectify the herding effect in the Sri Lanka Market. They have used 164 individual investors survey to identify several behavioural factors effect on investment decisions in Colombo Stock exchange and their results supported the strong existence of Herding behaviour in Colombo Stock Exchange. Kengatharan and Kengatharan (2014) have identified four variables impacting herding in CSE namely Choice of stock, volume of stock, buying and selling of stocks and speed of herding. They concluded that, herding factor has moderate influence in the investment decisions.

Sri Lanka is a country which will be sailing to upper middle income category in the next few years. So, it is obvious that analysing on herding in upper middle income countries is much supportive to this study. Chiang and Zeng (2010) examined the herding behaviour in 18 countries across the globe and their study has supported to provide strong evidence regarding presence of Herding in most of the upper middle income countries like Brazil, Mexico, Malaysia, and Thailand. By applying daily data from May 25, 1988, through April 24, 2009, for industrial stock returns, their study finds significant evidence to support the existence of herding in each national market. Duasa, J anid Kassim S.H (2008) examine the existence of herding behaviour among foreign investors in Malaysia Stock Market and they have found evidence to the existence of herding behaviour among the foreign investors in Malaysian Capital Market. Further, they have identified that herding supported to generate capital outflows as well as inflows to the market.

Herding effect is hovering around the special cases where there is significant impact to market activities due to market instability. Laih & Liao (2013) examined six Asian – Pacific stock markets during the period of sub-prime mortgage crisis. Their findings witnessed no evidence of Herding in the stock markets of Singapore and Hong Kong, and only partial evidence of herding in the stock markets of South Korea and Japan. However, strong evidence was witnessed in markets of Taiwan and China. Lin et al (2013) build up Herding behaviour index in capturing the period of Asian Financial crisis which began in July 1997, the dot com bubble burst which started in early 2000, the global financial crisis which began in 2008 and the European sovereign debt crisis. They investigated Herding behaviour of each continents and among the continents namely Asia, Europe, North America, South America, Africa & the Middle East. They concluded that a major crisis such as the Global financial Crisis in 2008 and the European sovereign debt crisis affected all the countries significantly and led the higher value of Herding behaviour Index. Further, Asian and South American markets witnessed higher value of their Index during the period of Asian Crisis.

In addition to that, some researches have provided some reasons for herding. According to Scharfstein & Stein (1990, 2000), fund managers do not know their own skill level, so that wrong investments and allocation decisions can be attributed to a bad comma signal rather than to a lack of skills. Prosad, Kapoor, & Sengupta, (2012) documented two reasons for herding of

individual investors namely social pressure and another common logic that crowd cannot be wrong and knows better than individual investors.

Methodology

This research examine the presence of herding behaviour in Colombo Stock Exchange from 2007-2010 and 2010- 2018. Researchers believed that the time interval has accurately captured the market fluctuations after the civil war situation of Sri Lanka. To capture the herding effect, this study uses the Cross Sectional Absolute Deviation (CSAD) methodology proposed by Chang Cheng and Khorana (2000) and Cross Sectional Standard Deviation (CSSD) Methodology proposed by Christie and Hung (1995).

Closeness of individual security return to overall mean of entire market return is defined as Cross Sectional Standard Deviation. Particular equity market which fully exposures to the herding anomaly represent the zero dispersion or zero Cross Sectional Standard Deviation. Whose measure is defined as,

$$CSSD_t = \sqrt{\frac{\sum_{i=1}^N (R_{i,t} - R_{m,t})^2}{N-1}}$$

Where,

N is the number of stock in the aggregate market portfolio,

$R_{i,t}$ is the observed individual stock return i at time t ,

$R_{m,t}$ is the cross sectional average of the returns in the market portfolio.

Spread between individual security return and market return are predicted to be low when herding behaviour is present. Christen & Hung (1995) suggest that low dispersions by itself do not promise the presence of herding. They articulated that the lack of new information leads to lower the security return dispersion. To overcome this, they extend their research to identify the Herding in extreme market places by introducing Dummy variables regression model.

$$CSSD_t = \alpha + \beta L D^L + \beta U D^U + \epsilon_t$$

Where,

D is a dummy variable set to represent market extreme condition

D^L will equal to 1 if the market return lies in the extreme lower tail of the distribution and equal to zero otherwise.

D^U will equal to 1 when the market return lies in the extreme upper tail of the distribution and equal to zero otherwise

Christen & Hung (1995) uses 1% and 5% percentiles of the distributions to define extreme security return variations. A negative and statistically significant βL suggest an increasing at decreasing rate of cross-sectional returns dispersion during extreme market downtrend whilst negative and statistically significant βU suggest an increasing at decreasing rate of cross-sectional returns

dispersion at the time of extreme market uptrend. Both βL and βU in the empirical model indicate linear relationships between market return and cross-sectional returns dispersion.

Cross Sectional Absolute Deviation Method (CSAD) proposed by Chang, Cheng & Khorana (2000) also were used and according to them dispersion of security returns will decrease or increase at decreasing rate in case of herding moments. They proposed that relationship should be negative and nonlinear in presence of herding and the nonlinear regression specification with the cross-sectional absolute deviation, abbreviated CSAD, as a measure for dispersion.

$$CSAD_t = \frac{\sum_{i=1}^N |R_{i,t} - R_{m,t}|}{N}$$

Where,

$R_{i,t}$ is the observed stock return of firm i at time t ,

$R_{m,t}$ is the cross-sectional average return of N stocks in the portfolio at time t , and N is the number of stocks in the portfolio.

CSAD is an alternative test for the CSSD. Instead of using dummy variables Chang, Cheng & Khorana (2000) extend the model using a quadratic equation used to test the behaviour.

$$CSAD_t = a + \gamma_1 |R_{m,t}| + \gamma_2 R_{m,t}^2 + \varepsilon_t$$

Where,

$R_{m,t}$ stand for market return.

A significantly negative γ_2 coefficient implies evidence of herding behaviour.

CSSD model regression specification lower and upper dummies is used to represent extreme market movements. Instead of using one regression model CSAD method use two other models to identify herding in bull and bear market phrases. The test is constructed in the same way as for the entire market, although divided into two parts de-pending on the sign of the corresponding market return:

$$CSAD_t^{UP} = \alpha + \gamma_1^{UP} |R_{m,t}^{UP}| + \gamma_2^{UP} (R_{m,t}^{UP})^2 + \varepsilon_t, \quad \text{if } R_{m,t} > 0$$

$$CSAD_t^{DOWN} = \alpha + \gamma_1^{DOWN} |R_{m,t}^{DOWN}| + \gamma_2^{DOWN} (R_{m,t}^{DOWN})^2 + \varepsilon_t, \quad \text{if } R_{m,t} < 0$$

The test suggests that negative and statistically significant β_1 and β_2 coefficients indicate that the dispersion of stock returns increase at a decreasing rate in either during market uptrend and/or market downtrend. The non-linear term of the empirical model facilitates the identification of herding behaviour in the period of market rallies and/or market sell-offs.

In addition to the above two empirical models, correlation analysis among market securities helped to identify presence of Herding.

Following Hypothesis were also used

- Cross Sectional Absolute Deviation Method

$H_0 = \gamma_2$ negative and statistically significant

$H_1 = \gamma_2$ is not negative and statistically significant

- Cross sectional Standard Deviation Method

$H_0 = \beta_L$ and β_U negative and statistically significant

$H_1 = \beta_L$ and β_U not negative and statistically significant

The All Share Price Index (ASPI) is used as a proxy for market return. All the data for security returns is extracted through Colombo Stock Exchange Data library CD. Stationarity is a salient feature of CSSD and CSAD data series so researcher applied the Augmented Dickey fuller test (unit root test) the study and to detect the stationarity of the series. CSSD and CSAD variables were calculated using excel spreadsheets. Regression analysis, their diagnostic and stationarity were tested using E-Views.

Findings and Discussions

According the method proposed by Chang et al (2000) focus is on non-linearity of the herding and they demonstrated that market return and CSAD series has quadratic relationship. The regression results of the coefficients and the overall model adequacy results as follows,

Table 1: Regression Analysis Results: Time period :2007-2010

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.008	.000		37.946	.000
1 $R_{m,t}$	.333	.035	.416	9.435	.000
$R^2_{m,t}$	8.519	.911	.413	9.355	.000

Source: Authors

The results analysis of the Table1 showed that coefficient attached to the square of market return is positive and statistically significant. This showed and gave evidence regarding absence of Herding behavior during the period 2007-2010 of study and existence of nonlinear relationship of Herding.

Table 2: Regression Analysis Results: Time period: 2010-2013

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.008772	0.000372	23.58671	*** 0.0000
$|R_{MT}|$	0.427139	0.091031	4.692226	*** 0.0000
R_{MT}^2	0.785104	3.401518	0.230810	0.8175

Source: Survey data analysis

*** indicates significant at 1 percent level ** indicates significant at 5 percent level

The results of regression analysis, showed that coefficient attached to the square of market return is positive and statistically not significant, which is interpreted as absence of herding in Colombo Stock Exchange during the period of 2010- 2018 (table 2). Apply the following regression equation for Bull market phrase revealed that there is no Herding behavior in the Bull market phrase during the period of 2007-2010.

$$CSAD_{UP} = \alpha + \beta_1 R_{m,t}^{UP} + \beta_2 R_{m,t}^{2,UP} + \mu$$

$$CSAD_{UP} = 0.008 + 0.423 R_{m,t}^{UP} + 6.864 R_{m,t}^{UP^2} + \mu$$

Table 3: Regression Analysis Results for Bull market :2007-2010

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.008	.000		23.181	.000
1 $R_{m,t}$	.423	.052	.497	8.070	.000
$R_{m,t}^2$	6.864	1.313	.322	5.228	.000

Source: Authors

As per table 3 positive and statically significant β_2 coefficient indicate not Herding Behavior take place in during the period (2007-2010) of Study. The bull market phrase model revealed that return dispersion is increasing at increasing rate during the bullish market situations.

When focus on second time period of 2010 to 2018, the following outcomes were witnessed (Table 4).

$$CSAD_t^{up} = c + y_1^{up} |r_{mt}^{up}| + y_2^{up} (r_{mt}^{up})^2 + \varepsilon_t$$

$$CSAD_t^{up} = 0.009017 + 0.513093 |r_{mt}^{up}| - 4.977069 (r_{mt}^{up})^2 + \varepsilon_t$$

Table 4: Regression Analysis Results for Bull market :2010-2018

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.009017	0.000598	15.07926	*** 0.0000
$|R_{MT}|$	0.513093	0.137677	3.726796	*** 0.0002
R_{MT}^2	-4.977069	5.017584	-0.991925	0.3215

Source: Survey data analysis

*** indicates significant at 1 percent level ** indicates significant at 5 percent level

Though y_2 coefficient is negative, it is statistically insignificant. Which indicate that Herding Behaviour did not took place during the period of Study. Further, it indicates that, investors in Colombo Stock Exchange take decisions based on a rational way in bull market phases, but not irrationally imitating overall market behavior.

Applying the following regression equation for bear phrase following outcomes witnessed.

$$CSAD_{DOWN} = \alpha + \beta_1 R_{m,t}^{DOWN} + \beta_2 R_{m,t}^{DOWN^2} + \mu$$

$$CSAD_{DOWN} = 0.008 + 0.260 R_{m,t}^{DOWN} + 10.055 R_{m,t}^{DOWN^2} + \mu$$

Table 5: Regression Analysis results for bear market phrase: 2007-2010

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.008	.000		28.539	.000
1 $R_{m,t}$	.260	.052	.335	5.008	.000
$R^2_{m,t}$	10.055	1.383	.486	7.272	.000

Source: Authors

Bear market phrase also shows a strong positive and statistically significant β_2 coefficient. It shows during the period of herding in bear market phrases, dispersion between individual security returns and market returns are increasing at increasing rate (table 5).

Applying the same regression equation for Bear market phase revealed that there is no Herding behaviour in the Bear market phase during the period of 2010-2018(table 6).

$$CSADt^{\text{down}} = c + \gamma_1^{\text{down}} |r_{mt}^{\text{down}}| + \gamma_2^{\text{down}} (r_{mt}^{\text{down}})^2 + \varepsilon_t$$

$$CSADt^{\text{down}} = 0.008706 + 0.273116 |r_{mt}^{\text{down}}| + 9.806873 (r_{mt}^{\text{down}})^2 + \varepsilon_t$$

Table 6: Regression Analysis results for bear market phrase: 2010-2018

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.008706	0.000448	19.42241	*** 0.0000
$|R_{MT}|$	0.273116	0.117439	2.325589	** 0.0202
R_{MT}^2	9.806873	4.518475	2.170394	** 0.0302

Source: Survey data analysis

*** indicates significant at 1 percent level ** indicates significant at 5 percent level

As previous time period, square of market return is strongly positive and statistically significant at 5 % level. So, it demonstrated that investors in CSE are not Herding during the down market phases. According to the method proposed by Christie and Hung (1995) to identify linear relationship of herding behaviour researchers have assigned Dummy variables for return distribution which lies on the 1%,5% and 10% regions. Irrespective upper and lower limits of the return distributions as follow (table 7).

Table 7: Regression Analysis Results- CSSD 2007-2010

	1% Percentile	5% percentile	10% Percentile
Constant	0.003710 (t :19.33)	0.003598 (t :17.14)	0.003567 (t : 14.52)
DL	0.000285 (t :1.36)	0.000369 (t : 1.64)	0.000428 (t : 1.65)
Du	0.000832 (t : 3.97)	0.000987 (t : 4.35)	0.000974 (t: 3.75)
R Square	0.031	0.039	0.0315
F Value	14.709	18.548	14.909
Significance Level	0.000	0.000	0.000

Source: Authors

According to the regression analysis results lower phrases of the return distribution coefficients are very low and statically insignificant. However, upper phrases of the market extreme movements' Dummy coefficients are significant and positive. So, it implied that investors in Colombo Stock Exchange are not herding during the period (2007-2010) of study in both up and down market phrases as well as market as a whole. During the period of 2010 to 2018 CH model is implemented by calculating daily CSSD for each stock and regressed against two dummies, lying at the upper and lower 1 % and 5 % tails of the market return dispersion. . Respective upper and lower limits of the return distributions are as follows (table 8).

Table 8: Market return (Rm) distribution limits

	5 %	1 %
Upper	0. 000551353	0. 000633
Lower	- 3. 96023E-05	- 0. 00012

Source: Author complied

Researchers applied dummies for each points which surpassed the above critical regions and it resulted in the following regression results (table 9).

**Table 9: Regression Analysis Results- CSSD
5 % percentile**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	0. 012954	0. 000737	17. 56995	*** 0. 0000
D _L	0. 001894	0. 000774	2. 445796	** 0. 0145
D _U	0. 003027	0. 000779	3. 885782	*** 0. 0001
R Square	0. 009653			
F statistic	10. 51716			
Significance level	0. 000028			

Source: Survey data analysis

1 % Percentile

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	0. 012015	0. 005536	2. 170336	** 0. 0301
D _L	0. 002835	0. 005541	0. 511541	0. 6090
D _U	0. 003664	0. 005541	0. 661202	0. 5086
R Square	0. 002957			
F statistic	3. 199660			
Significance level	0. 040970			

Source: Survey data analysis

*** indicates significant at 1 percent level ** indicates significant at 5 percent level

According to regression analysis results obtained, lower phases of the return distributions of both coefficients are low and positive but statically significant at 5 % criterion and insignificant at 1 %

criterion. Upper phases of the market extreme movements' Dummy coefficients are positive and significant at 5 % criterion and insignificant at 1 % criterion. Obtained results of 2010 to 2018 reinforce the results obtained during the period of 2007 to 2010. It concludes that investors in Colombo Stock Exchange are not herding during the period of study in both up and down market phases as well as the market as a whole according to Cross Sectional Standard Deviation model.

Conclusion and Recommendations

The study of Herding in Colombo Stock Exchange was undertaken with the objective of identifying any evidences regarding the presence of market-wide herding in the equity market in Sri Lanka during the civil war era and post war era. Researcher has examined the market wide herding in Colombo Stock exchange applying the Cross Sectional Standard Deviation Method & Cross Sectional absolute Deviation method. Thus, both methods implied that investors in CSE are rational and not bounded in Herding behavior during the period of study. That is, both methods implied that investors in Colombo Stock Exchange are rational and do not blindly imitate overall market behaviour, in other word they do not bounded in Herding behavior. When the time of Herding, return dispersion is not very low and not decreasing at decreasing rate.

This study leads to a new point to think; whether investors in CSE are actually rational. Researcher has applied the Cross Sectional Absolute Deviation method and Cross Sectional Standard Deviation Method to detect the presence of Herd Behavior. This study aligns with local study regarding Herding done by Sewwandi W.G.T.(2016) but contrary to the Study of Menike Dunusinghe and Ranasinghe (2015).Sewwandi W.G.T.(2016) employed CSAD method and she documented that investors in CSE are not Herding during her time line of 2001-2015. Menike and all documented that investors in CSE base their investment decisions on mass's decisions of buying or selling stocks and they react quickly to others investment decisions with an expectation of higher returns. They further argued that regret aversion and overconfidence of investors leads to Herding in Colombo Stock Exchange. However their method is based on primary data of 164 individual investors.

This Study is further moderately supported to the Kenganathan and Kengatharan (2014) which documented that Herding factor has low influence in investment decision making. The main point is that their study is based on survey data of 125 individual investors. The most celebrated methods of CSAD and CSSD methods are based on secondary data (Security prices). Moreover Sewwandi (2016) concluded that to reach a valid conclusion despite her findings need to carry out a questionnaire based survey among individual investors in CSE. Thus, it shows Investors in Colombo Stock Exchange has unseen tendency of Herding which was unable to get captured by the CSSD and CSAD methods. Two different dimensions have given two views regarding the Herding and this Study and Sewwandi (2016) provided an evidence regarding the absence of Herding in Colombo Stock Exchange during the period of studies according to the secondary data. On contrary Menike et al (2015) and Kenganathan and Kengatharan (2014) based their researches on primary data models. It seems unseen herding was observed in the literature done accordance with primary data. However Sri Lankan literature shows some immature nature regarding the Behavioral finance theorem . So it does not support to reach a valid conclusion whether investors actually are herding or not.

Researchers have carried out postmortem studies regarding why Investors in CSE shows an absence in Herding. First researchers analyzed the similar results obtained from other regional Markets very closer to CSE believing those may be a reason for absence of Herding in CSE Javed , zafar et al documented that absence of Herding in Pakistan stock market and they revealed that short term nature of Herding behavior which eliminate the impact of long term prices is a reason for absence of herding. Further, Bikhandani and sharma (2000) documented that investors avoid risk for small size firms because of the difficulty of gathering information about them. However this study is based on blue chip portfolio and therefore Herding can be absent due to that phenomena.

Moreover, scholars argued that institutional investors herd more than individual investors due to their easy accessibility of others information. However, this study leaves the point of individual and institutional, because Colombo Stock Exchange do not segregate investors into institutional and individual according to their investment exposure to individual securities. Further this study does not attempt to employ macro-economic variables impact to the Herding. It is very difficult to quantify the macro variable effect because there is no publically available daily macroeconomic variable movements in Sri Lanka. Even though we can incorporate daily Exchange rate and converted daily interest rates, it is very difficult to incorporate our empirical models due to the poor literature support.

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Factors Influencing the Capital Adequacy Ratios of Sri Lankan Banks- A Panel Data Analysis

Gunawardhana, C. S.¹ and Damayanthi, N. M. M.²

Regulations of banking industry are being changed from time to time through the international standards and thereby the regulators. The important aspects of the banking sector regulations started with the introduction of Basel accords which successfully help to face the financial crisis at present and in the future. When introducing such regulations, there were more discussions on the banks' capital. Even though the capital is more significant factor of a bank, Basel guidelines stressed to maintain higher capital ratios for a bank. Basel I, Basel II, Basel III and discussions for Basel IV, capital is the main target as a resolution factor for any financial crisis. Hence, this paper examines the factors influencing the capital adequacy ratio (CAR) of ten largest domestic commercial banks in Sri Lanka during the period from 2010 to 2019. CAR is an important ratio which protects banks against excess leverage, insolvency and protects them out of difficulty. This study employs ten bank's specific variable i.e., bank size (BS), Loan to Asset Ratio (LAR), Return on Equity (ROE), Deposit Asset Ratio (DAR), Risk Asset Ratio (RAR), Return on Assets (ROA) and Equity Ratio (EqR) whereas dependent variable is the CAR of domestic licensed banks in Sri Lanka. The results show that many factors affect towards the CAR which is the main factor of absorbing losses in a bank. In this study, linear regression model uses to test the relationship between variables and to test how banks' specific factors influence on CAR, the research further employees the panel data analysis with fixed effect model. The results from the panel regression revealed that banks' specific factors such as EqR, RAR, ROE and ROA are influencing factors for the changes of CAR in domestic licensed banks in Sri Lanka. Further, it is required to strengthen the supervisory mechanism of banks by the regulator as these factors are very crucial and affect to maintain financial system stability of the country.

Keywords: Bank Ratio, Bank Size, Capital Adequacy Ratio, Panel data analysis, Risk Weighted Assets

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¹ Central Bank of Sri Lanka, Sri Lanka (champsig@cbsl.lk)

² Central Bank of Sri Lanka, Sri Lanka (manel@cbsl.lk)

Introduction

The trade-off between risk and return is an important factor that has plagued financial sectors since in the past. Therefore, when understanding the growth of financial sector, it is important to study the associated risk with such growth. However, after global financial crisis, regulators and global bodies have embedded prudent requirements upon financial institutions to keep a check on excessive and detrimental growth as the expense of stability. A key development of this nature has been the capital adequacy requirements rolled out under Basel frameworks.

Capital Adequacy Ratio (CAR) is an important ratio which protects banks against excess leverage, insolvency and protects them out of difficulty. It is defined as the Ratio of Bank's Capital in relation to its Current Liabilities and Risk Weighted Assets (RWA). Risk weighted assets is a measure of bank's assets, adjusted for risks. An appropriate level of capital adequacy ensures that the bank has maintained sufficient capital to expand its business while at the same time its net worth is enough to absorb any financial downturns without becoming insolvent. It is the ratio which ensures that the banks growth is achieved while being able to manage other risks such as credit, market, operational and other risks. Sri Lankan banks moved capital adequacy requirements under Basel I to Basel III in line with the guidelines issued by the Central Bank of Sri Lanka (CBSL). Accordingly, following capital ratios are applicable to Sri Lankan Banks.

Table1: Ratios of Minimum Capital Requirements (CAR) for Licensed Banks in Sri Lanka

Components of Capital	Banks with Assets less than Rs. 500 bn	Banks with Assets Rs. 500 bn and above
Common Equity Tier 1 including Capital Conservation Buffer	7.0%	8.5 %
Total Tier I including Capital Conservation Buffer	8.5%	10.0%
Total Capital Ratio Including Capital Conservation Buffer	12.5%	14.0 %

Source: Central Bank of Sri Lanka

As per Basel accords, the calculation of CAR is given below;

$$1) \text{ CAR (Tier 1)} = \frac{\text{Common Equity Tier 1 capital}}{\text{Total Risk Weighted Assets (RWA)}} * 100$$

Total Risk Weighted Assets (RWA)

$$2) \text{ Total CAR} = \frac{\text{Total capital Fund}}{\text{Total Risk Weighted Assets (RWA)}} * 100$$

When calculating the capital ratios under Basel III, it is required to include capital buffers. This self-enforcing formula ensures that, banks which are willing to take augmented levels of risk are forced to provide additional capital thereby bringing a balance towards the stability of the institution.

The asset quality position measures the financial efficiency of banks while capital adequacy position measures going concern of banks. Further, the capital adequacy position depends on both the level of capital and the asset quality due to direct impact of RWAs of the banks. It can be observed that there are some contradictory arguments as to whether increase in capital adequacy influence on the quality of assets in firms or not (Pastory and Mutaju, 2013). Mitchell (1984) investigates whether the

capital adequacy position depend on assets quality of a bank and shows that capital adequacy position will increase when decreasing the asset quality in order to protect the banks against risks.

Pastory and Mutaju (2013) indicate that the well-capitalised banks with respect to capital adequacy force to increase in asset quality of banks. Abdioglu and Ahmet (2001) find a positive relationship between asset quality and capital adequacy. Al-Sabbagh (2004) indicates that capital adequacy has been identified as an indicator of risk exposure of banks. Many risks in banks such as credit, liquidity, interest, market and exchange risk are taken into consideration of calculating the CAR. Accordingly, the CAR is used by the regulators as a 'safety and stability' tool for a bank (Leila et al., 2014). Santomero and Watson (1977) reveal that capital regulations were too tight and it influences in reducing credit offers thereby influence for reduction of productive investments in banks. In a well-managed bank, capital is considered as a proxy of asset size (Jeff, 1990). Reynolds et al., (2000) identify that the profitability and preferences for loans increase with the size of a bank but capital adequacy shows negative relationship with its size and hence large banks have smaller CAR while more profitable banks have more CAR. Rime (2001) investigates the relationship between bank's capital and risk behavior of Swiss banks and revealed that regulatory pressure and capital ratio shows a positive and significant relationship but there is no evidence of capital requirement and that has significant effect on bank's risk-taking behavior. Thampy (2004) investigates the impact of capital adequacy regulations on loan growth of a bank and shows that there is small impact on loan growth of banks with high capital ratios. Further, the research shows that in a capital constrained environment, supply of loans will be reduced by banks (Thampy, 2004). Toby (2008) investigates the impact of bank liquidity management practices on industry asset quality and finds that applying the minimum liquidity ratio is irrelevant in controlling bank's non-performing loans.

Thus, in considering these different schools of thought, the aim of this study is to examine the industry specific factors that influence the CAR of licensed banks in Sri Lanka. Accordingly, linear regression model is used to find the relationship among the selected variables and several econometric tests are employed to find the effects of varying performance indicators on capital adequacy and similarly how capital adequacy affects these indicators.

Problem Statement

Capital adequacy plays an essential role in the banking sector in Sri Lanka, by being a cushion to absorb unexpected losses due to many factors specially the absorbing losses. The important requirement for a bank is sufficient and adequate capital to maintain the stability of the financial sector. Therefore, every bank must keep balance between capital and available risk in its assets. Hence, finding the influential factors on capital adequacy of licensed banks in Sri Lanka is an important segment due to maintaining financial system stability is one of the core objectives of the regulator and help for safety of depositors of the country.

Even though the many researches attempt to find out the relationship on capital adequacy on banking sector in many countries, still there is a gap of findings in industry specific factors on CAR in Sri Lankan banks. Further, it could be observed that lack of researches to find the relationship between capital adequacy and financial factors in Sri Lanka. Therefore, the study attempts to investigate this empirical gap.

Thus, in the modern day, capital adequacy stands for creating a competitive environment for banks. Accordingly, this research attempts to identify the key industry specific factors which impact the CAR in Sri Lankan banks and hence address the following areas in relation to the CAR.

- The significance of a banks size (asset base)
- The significance of the composition of loans as a percentage of total assets

- The significance of the Return on Equity
- The significance of Deposits as a percentage of Assets
- The significance of Risk Asset Ratio
- The Significance of Return on Assets
- The Significance of Risk to Asset Ratio.

Objectives of the Study

Understanding and focusing on CAR and its determinants would enable banks to identify mechanism to better improve their capital position when it is needed. Therefore, this study is focusing the following main objectives:

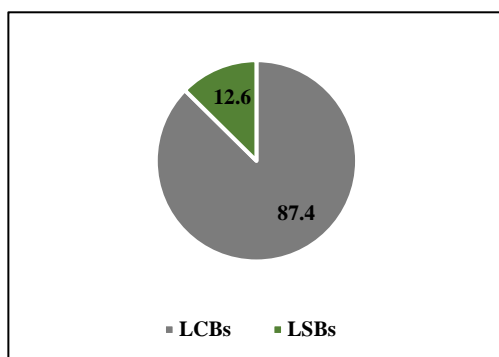
- Perform a panel data analysis for a conclusion on determinants related to CARs in the 10 largest domestic commercial banks in Sri Lanka.
- Identify key determinant factors of CAR
- Investigate the industry specific factors of Sri Lankan banks' capital adequacy ratio.
- Evaluating the effectiveness of the present regulations -This study will be based on the CAR which all banks are expected to maintain above the level of 10% as per the mandated regulations, the study will help to evaluate whether this threshold which is above the Basel III requirement of 10% (total capital ratio including capital conservation buffers are required to maintain 14% which is international requirement of 10.5%) has adversely affected the performance of banks in anyway as banks tend to maintain a historical buffer above the stipulated threshold.
- Understand the overall trend in CAR ratio of the selected sample of Sri Lankan banks.
- Identify how the determinants of CAR is related to Sri Lankan banks.

Overview of the Sri Lankan Banking Industry

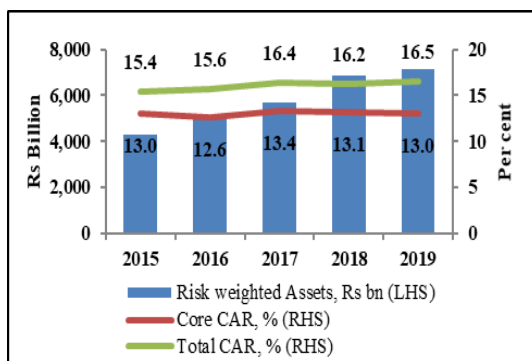
The Sri Lankan banking sector is broadly categorised into two major segments i.e. Licensed Commercial Banks (LCBs) and Licensed Specialized banks (LSBs), 26 and 7 in number, respectively (end 2019). The entire banking sector in Sri Lanka accounted to 62.1% of the 12 trillion financial sector assets as at end 2019 (Annual Report, 2019, Central Bank of Sri Lanka).

The LCBs accounted for 54.3% and 87.4% of the Financial Sector and Banking Sector Assets (figure 1) respectively. It is however important to note that around 46% of the commercial banking assets were concentrated among the 2 large state banks (Table 2). This may significantly impact on findings pertaining to banking industry owing to their sheer magnitude. In terms of the asset base and the magnitude of services provided, the LCBs are the single most important category of financial institution within the banking sector.

The key regulator for the Sri Lankan Banking Sector, the Central Bank of Sri Lanka (CBSL) has consistently aligned its local regulatory requirement to be on par with the global standards, having initially adopted the requirements of Basel I, the CBSL being on its approach to adopt the Basel II Capital Adequacy Framework from beginning 2008. With a stage by stage implementation taking place over the years, presently all banks have completed the Basic indicator approach for all Risk types and the Standardized approach for some risk types (Credit Risk & Market Risk). It is also important to note in the context of this study that, Capital Adequacy Ratio (CAR) for Tier I was placed at 5 % and Tier II at 10% for the Sri Lanka by CBSL which is above the minimum ratios of 4% and 8%, respectively (figure 2). It will be important to note that this initial decision by CBSL to maintain a higher level of CAR may have a significant influence on the results of this study.

Figure 1: Composition of Total Assets of the Banking Industry

Source: Central Bank of Sri Lanka

Figure 2: Composition of Total Assets of the Banking Industry

Source: Central Bank of Sri Lanka

Table 2: Gross Assets of 10 Largest Banks (Rs Mn)

Bank	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Bank of Ceylon	732.8	853.0	1,081.3	1,238.1	1,378.0	1,616.4	1,731.4	2,018.3	2,364.4	2,516.2
People's Bank	569.9	710.2	927.0	991.7	1,079.2	1,240.2	1,367.0	1,522.1	1,803.4	1,946.3
Commercial Bank of Ceylon PLC	381.4	452.7	525.7	621.3	808.7	906.6	1,039.4	1,159.6	1,335.3	1,424.5
Hatton National Bank PLC	320.9	384.2	450.2	516.4	579.7	736.2	865.8	960.6	1,108.2	1,160.2
Sampath Bank PLC	191.5	249.5	310.7	382.4	434.6	528.7	662.4	798.0	926.5	982.6
Seylan Bank PLC	165.4	179.8	196.0	225.9	259.9	311.0	369.1	417.7	483.3	532.9
National Development Bank PLC	107.7	140.6	165.0	205.3	268.0	314.4	340.9	388.2	483.2	545.6
DFCC Bank PLC	-	-	-	-	-	238.2	281.9	327.9	379.8	412.5
Nations Trust Bank PLC	84.3	102.3	123.2	142.8	160.7	179.0	214.6	270.8	334.2	335.2
Pan Asia Banking Corporation PLC	32.8	48.9	57.9	67.3	82.6	109.9	132.3	141.0	160.1	159.8
Licensed Commercial Banks	2,974.6	3,578.5	4,355.7	5,022.1	5,884.4	6,974.3	7,843.3	8,926.2	10,372.4	10,944.0
Banking Industry	3,550.5	4,252.2	5,098.2	5,941.5	6,971.8	8,077.5	9,046.6	10,292.4	11,794.0	12,522.7

Source: Published Annual Reports and Central Bank of Sri Lanka

Literature Review

Banks are simultaneously firms, financial intermediaries, and highly regulated business entities so that the form of incentive regulation is imposed by rule determines, a unique interaction between bank capital and behavior (Marques and Santos, 2004). In general, the decision of determining a bank's capital structure as well as the determination of capital structure on non-financial companies, but given the company's operating characteristics of different banks with different companies in other industries, the bank has a business risk and financial risk are different, so that the capital structure of banks differ from the non-financial corporate capital structure (Buser, 1981).

As stated by Gunawardhana and Damayanthi, 2019, the banks in Sri Lanka are in a much better position to meet Basel III regulations, because generally banks have better capital and liquidity ratios. However, they need to enhance information technology infrastructure and risk management systems in an efficient manner. Overall, higher capital and tighter liquidity requirements under Basel III will increase the capital requirements in Sri Lankan banks, as in other countries.

Bank regulators use capital regulations to ensure that the market capital is recognized as well as regulated to constrain bank risks. The bank capital regulation is one of the determinants that affect determination of the capital ratio should be maintained by the bank. Mishkin (2000) and Ghosh et al.

(2003) found that banking regulation; in this case the regulatory capital requirements affect bank's capital structure decisions.

Determination of capital structure decisions are taken by the management policy of the bank is affected by the shareholders. Ownership structure represents a source of power that can be used to control the management or control of the company, especially in the decision-making process or in company policies. Relevance of ownership structure on capital structure can be explained through the agency cost theory, which states that managers and shareholders have an agency relationship.

Agency relationship in banking is very complex, because it involves the relationship between shareholders and bank's management as an agent, the relationship between bank and borrowers, and the relationship between bank and regulators. Thus, in addition to associated with the risk profile of the bank and the provision of additional capital criteria as defined by banking regulations set by the banking supervisory authorities, there are other determinants that may affect bank's management in determining the amount of a bank's capital adequacy ratio.

The bank's capital structure consists of voluntary capital structure and involuntary capital structure (Besanko and Kanatas, 1996; Cornett and Tehranian, 1992, and Keeley, 1989). Voluntary capital structure is that capital structure decisions are done using the determinant factors in accordance with the hypotheses used in the theory of capital structure of the bank in general (theory of capital structure of the firm), whereas involuntary capital structure is that capital structure decisions made by meet and comply with the requirements of minimum capital adequacy ratio set by the regulator (regulatory capital).

In analysing the relationship between CAR and the Asset quality of a bank it is important to keep in mind the numerous factors including asset quality, profitability, efficiency, size of the bank etc. that contribute towards impacting the CAR. Thus, in preparing for this research, past studies connecting to capital adequacy and the identified factors have been given due consideration. The literature review has been conducted primarily with a focus on each hypothesis.

Capital Ratio examines the relationship between bank profitability and bank capitalization. Capital ratio is one of the basic measures of capital strength by Equity to total assets ratio. It is generally assumed that well-capitalized banks have high profitability and lower probable cost of financial distress. Banks with a higher capital are more protected from insolvency (Hirindu and Kushani, 2017).

Determinants of Capital Adequacy Ratio

Significance on the size of Bank

The Size of a bank has historically been a key determinant in the capital structure/level. Researchers have taken the view that large firms are less susceptible to bankruptcy because they tend to be more diversified than smaller companies. Reynolds et al. (2000) studied financial structure and bank performance from 1987 to 1997. They have examined the financial structure and performance of banks in Asian Countries and found that profitability and loan preferences increase with size, but capital adequacy have negative relationship with size, so large banks have smaller capital adequacy ratios, and more profitable banks have more capital adequacy. Bateni L., etl., (2014) in their study of 6 private Iranian Banks during the period 2006 – 2013 found that CAR is adversely affected by bank's size, with a conclusion that large Iranian banks have low supervisory control on their capital adequacy ratio, and large banks attain a high risk assets portfolios. Amidu M (2007) investigates on the determinants of Capital Structure in Banks in Ghana and conclude that profitability, corporate tax, growth, asset structure, and size influence banks' capital structure decision. Ghoshi et al. (2003) find that Indian public sector banks have not resorted to assets substitution across the risk weight categories but instead substituted low risk government securities for high risk loans in order to meet their capital requirement. This shows that capital regulation does influence the banks decisions

making. Bank Size is an important bank specific determinant of bank profitability (Hirindu and Kushani, 2017).

Loans as a percentage of Assets

Thampy (2004) explains the impact of capital adequacy regulation on loan growth. Since loans have the highest risk weight, a capital constrained bank would want to conserve its capital by allocating fewer assets to loans. This trend becomes more severe as the capital constraint becomes binding which is the case for banks with less than the required capital level. However, for banks with high capital adequacy ratios, there is little impact on loan growth. He also shows that in a capital constrained environment banks will reduce the supply of loans. It also provides an explanation for the high proportion of investments held by banks. The reduction in the supply of loans is greater for banks which are inefficient. The impact of higher capital standards on the supply of bank credit in the economy would have a greater impact in economies which have a bank dependent or dominated financial system as opposed to a capital markets dominated system. Abdioglu and Ahmet (2011) investigate the determinant of capital adequacy in Turkish banks and explain that there is a positive relationship between asset quality and capital adequacy, especially the ratio of loan to total asset.

The significance of Deposits as a percentage of Assets

Deposits are the primary source of funding for the majority of banks in Sri Lanka and is the global phenomena as well (barring investment banks) thus ideally an Increase in deposits should be followed by the increase in capital requirements so that rights of the depositors are protected as well as to protect bank from insolvency. In the case, if the depositors are not able to determine the position of the bank, financial soundness, the CAR will be lower than optimal. As stated in Büyüksalvarcı and Abdioglu (2011), Asarkaya and Ozcan (2007), the negative relationships between share of deposits and capital adequacy ratio can be observed.

Dowd (1999) finds that the minimum capital standards on financial institutions can be seen as a means for reinforcing the security of deposits and robustness of the banking system. Harold (1999) examines the same result as Dowd, in that many regulators and depositors were concerned about the security of deposit insurance system. His study applied existing bank risk-based on capital requirements to current credit union data to evaluate credit union's risk-based capital strength. Sharpe (1977) states capital as a difference between assets and deposits, so the larger the ratio of capital to assets (or the ratio of capital to deposit) the safer the deposits. As capital was adequate, deposits were "safe enough". His idea was that if the value of an institution's assets may decline in the future, its' deposits will generally be safer, the larger the current value of assets in relation to the value of deposits.

The Significance of Return on Assets and Return on Equity

Mathuva (2009) indicates that bank profitability has positive relationship with the core capital ratio and tier 1 risk is based on capital ratio. The study, applying the ROA and ROE as proxies for bank profitability for the period 1998 to 2007, also states that there is a negative relationship between the equity capital ratio and equity. Study done by Rafet Aktas et al., 2015 stated that bank size and ROA are significant impact on capital adequacy ratios.

Olalekan and Adeyinka (2013) in their study on Nigerian banks using the primary data analysis, find a non-significant relationship between capital adequacy and performance of banks but the secondary data analysis showed a positive and significant relationship between capital adequacy and performance of banks. This implies that for deposit taking banks in Nigeria, capital adequacy plays a key role in the determination of loan quality and profitability. It was discovered that capitalization and profitability are indicators of bank risk management efficiency and cushion against losses not covered by current earnings. Buyuksalvarci and Abdioglu (2011) which covered the period 2006 – 2010 on the Turkish Banking sector concluded that loans, ROE and leverage have a negative effect

on capital adequacy ratio (CAR) while loan loss reserve and return on assets have positive effects. Yuanjua and Xiao Shishun (2012) analyse the relationship between the CAR and some internal banking variables using regression analysis from 2005-2010. They use CAR as dependant variable while as independent variable they use: ROA, ROE, EPS, deposit loan ratio (DLR) and NPL. Accordingly, they find a positive relationship between ROA and CAR but a negative relationship between ROE and CAR.

Ahmadet et al. (2008) investigate the determinants of bank capital ratios in Malaysia and present a positive relationship between regulatory capital and banks' risk taking behavior. Further, this study observes that capital requirement regulations introduced in 1996 was ineffective whereas those mandated in 1997 are proved successful in the financial crises period. Santomero and Kim (1998) investigate risk in banking and capital regulation and indicate that increase in capital ratios tend to lower banking risks and hence improve the asset quality, since the banking risk is associated with the asset quality. Therefore, the capital ratios are the buffer against the asset quality deteriorations. Shrieves and Dahl (1992) analyse the relationship between risks and capital requirement in commercial banks and show that there is a positive relationship between asset quality as measured by risks and capital requirements. Banks with the higher capital above the regulatory requirements are expected to reduce risks exposure hence accelerate banks growth in terms of asset quality while banks with minimum capital requirements are greatly exposed to the higher risk.

Research Methodology

Data and Measurement

The aim of this study is to investigate the influential factors of capital adequacy ratio in Sri Lankan banks. This study is based on the time series data of 10 largest domestic commercial banks in Sri Lanka which accounts nearly 70% of the banking sector covering 2010 to 2019. The data was obtained from the CBSL, annual reports and rating agency reports of the selected sample bank.

Econometric Model

This study investigates the impacts of bank's specific variables on CAR by applying multivariate regression model using e-views econometrics software. Accordingly, the study analyses the relationships between the bank specific variables and the CAR. The study employs seven bank's specific variable i.e., bank size (BS), Loan to Asset Ratio (LAR), Return on Equity (ROE), Deposit Asset Ratio (DAR), Risk Asset Ratio (RAR), Return on Assets (ROA), Equity Ratio (EqR) whereas dependent variable is the CAR of domestic licensed banks in Sri Lanka. The total capital requirement requires a total risk-weighted capital adequacy ratio of 10 per cent (total Tier 1 including Capital Conservation Buffer and Capital Surcharge on Domestic Systemically Important Banks) which is used as the proxy for bank capital adequacy ratio in this study.

Explanatory variables and hypotheses:

Considering the above variables, this study investigates the impacts of bank specific variables on CAR by applying panel data regression model.

Bank Size (BS)

There are various methods to assertion the firm size. For example, it can be used market values of equity of the firm or the sell value of the firms. Like Ellul and Pagano (2006) use the total asset is utilizing as the firm size and because the firm size is very bigger than other variables. In this study, we use a logarithm of total asset to bring it near to the other variable size.

Loan to Asset Ratio (LAR)

The loan to assets ratio measures the total loans outstanding as a percentage of total assets. The higher the ratio indicates bank liquidity is low. The higher the ratio means that the bank is in a high-risk category and may be to higher defaults ($LAR = \text{total loans} / \text{total assets}$).

Equity Ratio (EqR)

Although leverage (capitalization) has been indicated to be essential in describing the performance of financial institutions, its effect on bank profitability is equivocal. As lower capital ratios suggest a relatively risky position, one might expect a negative coefficient on this variable (Berger, 1995). An enhancement in capital may increase expected earnings by decreasing the expected costs of financial distress; including bankruptcy (Berger, 1995). Capital is measured as total capital and reserves as reported in the balance sheet. EqR is calculated as total equity divided by total assets of the bank ($EqR = \text{total equity} / \text{total assets}$).

Return on Equity (ROE) and Return on Assets (ROA)

In this study, ROA and ROE are used as a proxy for profitability. Profitability is expected to have positive relationship with CAR because a bank is anticipated raising asset risk in order to get higher returns in most cases. Gropp and Heider (2007) indicate a positive relationship between profit and capital, relative to assets. ROA is a ratio of net income to total assets for the bank ($ROA = \text{net income} / \text{total assets}$). ROE is a ratio of net income to shareholder's equity of a bank ($ROE = \text{net income} / \text{shareholder equity}$).

Deposit Asset Ratio (DAR)

Yu Min-Teh (1996) indicate that adequate capital for banks as the level at which the deposit guaranteeing agency would just breakeven in insuring the deposits of individual banks with the premium, the bank pays. Sharpe (1977) defines the capital as a difference between assets and deposits, so the larger the ratio of capital to assets (or the ratio of capital to deposit), the safer the deposits. As capital was adequate, deposits were "safe enough". The idea was that if the value of an institution's assets may decline in the future, its' deposits will generally be safer, the larger the current value of assets in relation to the value of deposits. Dowd (1999) explains that applying the minimum capital standards on financial institutions can be seen as a means of reinforcing the safety of deposits and robustness of the banking system. DAR is calculated by total deposits divide by total assets ($DAR = \text{total deposits} / \text{total assets}$).

Risk Asset Ratio (RAR)

The RAR evaluates the amount of a bank's total regulatory capital in relation to the amount of risk that the bank is taking. The purpose of this ration is that all banks must ensure that a reasonable proportion of their risk should be covered by its permanent capital. Banks must keep a minimum RAR (total capital ratio) of 10%. Effectively, this means that 10% of the risk-weighted assets must be guarded against by permanent or near permanent capital. The higher the CARs, a bank has, the greater the level of unanticipated losses it can absorb before insolvency, so the less risky it should be in the bank which is also known as the solvency ratio. RAR measures as risk weighted assets divide by total assets of a bank ($RAR = \text{risk weighted assets} / \text{total assets}$).

In line with the objectives of this study, the following statements of the hypothesis created to test the relationship between industry specific factors towards the CAR in Sri Lankan banks.

- H01: There is no significant relationship between BS and CAR
- H02: There is no significant relationship between LAR ratio and CAR
- H03: There is no significant relationship between EqR and CAR
- H04: There is no significant relationship between ROE, ROA and CAR
- H05: There is no significant relationship between DAR and CAR
- H06: There is no significant relationship between RAR and CAR

Test Results and Analysis

The following regression model is used for this study since the research focus is to examine the simultaneous relationships between capital adequacy ratio and bank specific variables. Based on literature review of both theoretical and empirical studies, this study attempts to explore the relationship between CAR and seven banks' specific variables, namely BS, LAR, EqR, ROA, ROE, RAR and DAR. The regression of the model is as follows;

$$CAR = \beta_0 + \beta_1 BS_{it} + \beta_2 LAR_{it} + \beta_3 EqR_{it} + \beta_4 ROA_{it} + \beta_5 ROE_{it} + \beta_6 RAR_{it} + \beta_7 DAR_{it} + \varepsilon_{it} \text{ ----- (1)}$$

In terms of equation (1), β_0 is constant factor while β_1 to β_7 shows the coefficient of variables and ε is the residual error term of the regression. Table 3 shows the test results of unit root test. Test results indicate that only two variables were found to be stationary at level i.e., LAR and ROE. All other variables were taken at first difference to avoid spurious regression (Mahadeva, 2004).

Table 3: Summary of Im, Pesaran and Shin W-stat Test Results

Variable	Stat	Prob	I(0) or I(1) at 5%	No. of Observations
CAR	0.95048	0.1721	I(1)	190
DCAR1	7.64083	0.0000	I(0)	180
DAR	0.11416	0.5463	I(1)	190
DDAR1	4.14284	0.0000	I(0)	180
EqR	0.69864	0.7583	I(1)	190
DEqR1	5.31749	0.0000	I(0)	180
LAR	1.89773	0.0290	I(0)	190
LNBS	3.49363	0.9999	I(1)	190
DLNBS1	4.11824	0.0000	I(0)	180
RAR	0.07432	0.5206	I(1)	190
DRAR1	4.00405	0.0000	I(0)	180
ROA	1.28249	0.0999	I(1)	190
DROA1	5.99647	0.0000	I(0)	180
ROE	5.40421	0.0000	I(0)	190

The critical values are -3.15(10%), -3.46(5%) and -4.05(1%)

Source: Authors Calculation

Table 4 depicts the significance of independent variables in determining the value of dependent variables.

Table 4: Panel Regression Results - Fixed Effect Model (dependent variable: CAR)

Variable	Coefficient	Std. Error	t-stat	Prob
CAR	0.028663	0.026457	24.5041	0.2824
DDAR1	-0.016767	0.062483	0.0426	0.7897
DEqR1	0.264072	0.107843	0.3067	0.0163
DLNBS1	-0.055554	0.045192	-0.1263	0.2213
DRAR1	-0.207824	0.054315	-0.4210	0.0004
DROA1	-0.235032	0.068092	0.5162	0.0009
LAR	-0.052271	0.042113	0.1472	0.2172
ROE	0.025096	0.008424	0.1021	0.0043
R-squared		0.726983	Adj R-squared	0.682682
Prob(F-statistic)		0.042893		
Durbin-Watson stat		2.322272		

Source: Authors Calculation

Table 4 reports the R square value (0.726983) and suggest that the model serves its purpose in determining the impact of industry specific variables on CAR which reflects 72.70 per cent variability of the CAR can be explained by the independent variables of bank's size, DAR, EqR, RAR, ROA, LAR and ROE.

It was noted that first differences of deposit to assets ratio and natural log of bank size as well as the loan to assets ratio are not significant. However, the first difference of equity ratio, risk to assets ratio, return on assets ratio and return on equity ratio are significant in determining the capital adequacy ratio of a bank. If equity ratio (first difference) increases by 1 percent, the change in CAR is increased on average by 0.26 percent. Thus, this indicates a positive contemporaneous relationship between equity ratio and the capital adequacy ratio. This is expected as the numerator of the formula for CAR which comprises Common Equity Tier 1 capital (CET 1).

The results further indicate that increase in risk to assets ratio by 1 percent will decrease the CAR on average by 0.20 percent. It suggests that CAR and the risk to assets ratio has a negative contemporaneous relationship. This is also self-evident as the denominator of CAR is the risk weighted assets and the numerator of CAR is risk to assets ratio is also risk weighted assets.

The results further indicate that ROA and CAR have a negative relationship contemporaneously which indicates that when return on assets increase by 1 percent will effect on the changes in CAR by decreasing 0.23 percent. This is not in line with the expected sign as an increase in return was expected to be met by a corresponding increase in the capital adequacy. Further, it can be observed that a higher return is always associated with higher risk and therefore the CAR will decline as risk weighted assets increase. The return on equity has a positive relationship with CAR. The result could be attributed to the fact that with the higher return on equity i.e., CET 1 increases.

The F statistic shows that the variables are jointly significant with a P value of 0.04. The DW statistic is 2.32 which show that the model is mildly suffering from negative autocorrelation. DW statistic around 2 will indicates that model is free from either positive or negative autocorrelation.

In concluding the test results, EqR, RAR, ROA and ROE seem to affect CAR while DAR, NBS and LAR do not appear to have significant effects on CAR.

Table 5: Correlation Matrix

Correlation Probability	DDAR1	DEqR1	DLNBS1	DRAR1	DROA1	LAR	ROE
DDAR1	1 -----						
DEqR1	0.04083 0.5759	1 -----					
DLNBS1	-0.53453 0	-0.31632 0	1 -----				
DRAR1	0.246705 0.0006	0.147169 0.0427	-0.50224 0	1 -----			
DROA1	-0.0751 0.3031	0.305909 0	0.134774 0.0637	-0.37273 0	1 -----		
LAR	0.192466 0.0078	-0.03126 0.6685	-0.00413 0.955	0.029849 0.6827	- 0.02194 0.7638	1 -----	
ROE	-0.0803 0.2707	0.268922 0.0002	0.099464 0.1721	-0.10573 0.1466	0.53895 0	0.04102 0.5741	1 -----

Source: Authors Calculation

The correlation matrix suggests that the model generally does not suffer from severe multi-collinearity issue. However, there are some strong relationships such as, between BS and DAR, BS and RAR and ROE and ROA.

Table 6: Results of the Redundant Fixed Effect Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.496952	-9,172	0.8761
Cross-section Chi-square	5.404465	9	0.7993
Period F	0.602782	-18,174	0.8947
Period Chi-square	12.8562	18	0.8018
Cross-Section/Period F	0.540931	-27,181	0.9693
Cross-Section/Period Chi-square	17.1094	27	0.9294
Effects Test	Statistic	d.f.	Prob.

Source: Authors Calculation

The test results of the cross-section test conducted under redundant fixed effect model suggest that null is not rejected and the cross section only model is preferred to cross section/period model. The period test results suggest period only model is preferred to cross section/period model. However, the period only and cross section only models do not differ with regard to significance of variables. The variables in relation to change (first difference) of equity ratio, risk to assets ratio, return on assets ratio and return on equity are the significant variables under all three models and therefore either of the models would not show any materials variations.

Table 7: Correlated Random Effects - Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.646363	7	0.9164
Period random	2.512952	7	0.9272
Cross-section and period random	3.670456	7	0.8174

Source: Authors Calculation

The results of Hausmann Specification Test show that null hypothesis of Random Effect model is consistent thus may not be rejected. That would further imply that the Random Effects model is preferred to Fixed Effects Model. However, the Fixed Effect model having the higher R^2 value is preferred to Random Effects model in this study. The number of significant variables are equal using both the models and the DW statistics of the two models are also not significantly different.

Recommendations and Conclusion

This study attempts to ascertain the determinants of CAR in the Sri Lankan banking sector using a panel dataset and a fixed effect model. The empirical results support that the equity ratio, risk to assets ratio, return on assets ratio and return on equity ratio are the significant variables affecting capital adequacy ratio in Sri Lankan banks. The results do not find any consistent evidence to prove the popular global belief which reveals the bank size has a significant impact on CAR. This means that large Sri Lankan banks have low supervisory control over on their CAR, and large banks attain a high risk assets portfolio, represented in a positive relationship between RAR and NBS. Therefore, the composition of the balance sheet too which is expected to have a material impact of CAR did not display a notable significance in the Sri Lankan scenario as the composition of loans to assets and the composition of deposits to assets did not display a significant impact on CAR.

Further, the study shows that not all global perceptions may be applicable in the Sri Lankan banking context especially in view of determining CAR. Sri Lankan banks in order to improve the CAR other than the obvious option of infusing capital may concentrate on creating greater exposure to higher rated customers thereby lesser risk weighted assets, improving the efficiency of earning assets which in turn would translate to greater capital build-ups and thereby improvements in the CAR. Further, the size of the bank not having a significant impact on the CAR would mean that future supervisions on banks may use this information over the common understanding that larger the bank lesser would be the CAR. Additionally, the regulator may also find the research findings useful in evaluating the Internal Capital Adequacy Assessment Process (ICAAP), as banks project future CAR targets, its path of achievement and the impact on other variables.

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An Exploratory Study on Motivational Factors to Start – Up Social Enterprises in Sri Lanka

Gunasinghe, U. L. S. M.¹ and Fairoz F. M.²

The purpose of this study is to explore the motivational factors behind the social entrepreneurs to start-up social ventures in Sri Lanka. Motivational factors to start social enterprises is an undisclosed area in Sri Lankan context and the study contributes to generate new knowledge related to Sri Lankan social entrepreneurship setting. Inductive research approach is used for the study and data were collected from in-depth interviews and field observations. Multiple case study method was used to analyse qualitative data. The study found that social problems addressed by social entrepreneurs, educational and experiences, linkages and networks, social family background, religious conviction, personal characteristics and personal skills as motivational factors to start social enterprises. Findings suggest that government should play a vital role in creating favourable environment for social entrepreneurs through providing infrastructure facilities, encourage public – private partnership to attract donors and volunteers, and enhance social entrepreneurship education in universities, schools and other academic institutions to create social entrepreneurs. Knowledge generated by the study will be contributed to conduct empirical studies for future research and implications for policy makers.

Keywords: *Motivational factors, Social entrepreneurship, Sri Lanka*

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¹ Department of Management and Entrepreneurship, Faculty of Management and Finance, University of Ruhuna, Matara, Sri Lanka. (gunasinghemadhuwanthi@gmail.com)

² Department of Management and Entrepreneurship, Faculty of Management and Finance, University of Ruhuna, Matara, Sri Lanka. (mafasiya@badm.ruh.ac.lk)

Introduction

In entrepreneurship literature, social entrepreneurship has become a booming sector by generating social innovations as solutions for social problems. Mair and Marti (2006) defined social entrepreneurship as “exploit opportunities towards social change that satisfying human needs in sustainable manner by innovative use and resource combination process”. Social entrepreneurs play the role of change agents by “adopting a mission to create and sustain social value, recognizing and relentlessly pursuing new opportunities to serve that mission, engaging in a process of continuous innovation, adaptation, and learning, acting boldly without being limited by resources currently in hand, and exhibiting heightened accountability to the constituencies served and for the outcomes created” (Dees, 1998). Developed, and developing economies follow social entrepreneurship context with common objective which is alleviating social problems from regions. In international context, social entrepreneurship field has explored in different manners. Social entrepreneurship theories, impact of social enterprises to society, and motivations to start social business are mainly discussed subject areas of the social entrepreneurship (Bloom & Smith, 2010; Ebrashi, 2013; Ghalwash, Tolba, & Ismail, 2017; Haugh, 2005; Omorede, 2014; Smith & Stevens, 2010). Though the concept of social entrepreneurship has been acknowledged in the preceding years, empirical literature is limited (Lenox and York, 2011; Thompson, Kiefer and York, 2011, Dacinet al., 2010; Fayolle and Matlay, 2010).

In Sri Lankan context, social entrepreneurship is introduced as a novel field of entrepreneurship and social enterprises are becoming popular among Sri Lankan businesses. Moreover, Sri Lankan research studies have not focused mostly on social enterprises in the country. There is no government definition, policies and rules of social enterprises in Sri Lanka. Furthermore, Central Bank of Sri Lanka does not consider the impact of social ventures for country’s economy distinctly (Central Bank of Sri Lanka, 2016). Motivations to start social businesses has been discussed by international scholars which explore individual characteristics and background to start social ventures (Ghalwash et al., 2017; Omorede, 2014)). The budget proposals of Sri Lanka (2018) are addressed to become a Blue-Green economy. This focused to combine activities related to ocean resources and environmental sustainability to unleash full economic potential of the country. These signals show that entrepreneurs should come forward to come-up with social business ideas that are practical to address those issues. Further, as a developing economy like Sri Lanka, though some social enterprises are established to address those issues, there is lack of understanding and support for those enterprises. Further, to date, the academic dialog on social entrepreneurship within the context of emerging economies are limited. Moreover, social enterprises in Sri Lanka have been launched based on different motivational factors of social entrepreneurs based on different region and external environment. Although social enterprises are growing in the country, motivational factors to start social enterprises in Sri Lanka have not been considered through any studies in Sri Lanka. Thus, current research attempts to address the existing gap and aims to explore the motivational factors to start social enterprises in Sri Lankan context.

Literature Review

Social Entrepreneurship

Social entrepreneurship, social entrepreneur and social enterprise are main concepts that are distinguished in different ways by the school of thoughts including school of social enterprise and school of innovation (Dees and Anderson, 2006). The inception of Grameen Bank, by Professor Muhammad Yunus in 1976 by introducing microfinance to eradicate poverty and empower women in the rural villages of Bangladesh has paved the way to open-up the discussion of social entrepreneurship around the world (<http://www.grameen-info.org>). Bravo (2016) examined three school of thoughts which West enterprise school of thought, innovation school of thought and Asian enterprise school of thought that the person who solve social problems by social innovations have

been identified as social entrepreneur and the enterprise which fulfilled social mission without considering profit have been identified as a social enterprise in social enterprise school of thoughts in West and Asia. Furthermore, any enterprise in social entrepreneurship framework should be engrossed social aims by using innovative approach (Harun, Ariff, Ghadas, Shahirl, and Radzi, 2017). Alex (Huybrechts and Nicholls, 2012) defined in the social business school of thought that the enterprise with social aim should implement strategies to earn income. Moreover, social enterprises and their purposes can be identified as social entrepreneurship on innovation, social enterprise on commercialization, democratic enterprise on participation and social business based on trading to social purpose (Schmitz, 2006).

American approach and European approach differ from one another in the social innovation school of thought that characteristics of individual are unique in American approach and unique legal platform are considered by European approach which the enterprise established on profit oriented or not for profit enterprise structures (Bacq and Janssen, 2013). Survival of social enterprise depend on school of thoughts and the individual has introduced key foundation of social enterprises in innovation school of thought of US (Dees and Anderson, 2006). Moreover, Albert (Woolley, Bruno, and Carlson, 2013) remarked that American approach focuses on financial factors, mainly profit as individual factors for success of social mobility. Risk dominated on income of market have defined social enterprise school of thought of European approach without considering economic benefit and social enterprise should have related criteria includes contribution of group of citizens for launching of enterprise, production and selling activities, purpose of community benefit, economic risk in significant level, stakeholder participation for all activities, autonomy, narrow profit distribution, major attention for volunteer service and capital ownership not reasoning for decision making power according to EMES approach (Bacq and Janssen, 2013).

Social entrepreneurship is a catalyst for social transformation through creating innovative solutions to overcome social problems by achieving sustainable social transformations (Alvord et al., 2004). According to Roberts and Woods (2000), social entrepreneurship is the entrepreneurship application to fill gap between business and benevolence. Moreover, on needs of civil society questions should be raised on who should and who can take responsibility within social entrepreneurship framework (Roper & Cheney, 2005) across globalization by the government providing business facilities for international companies, trading among nations and creating flow of capital (Kind, 2015). Nicholls defined that social entrepreneurship is the process with innovative and effective activities to maximize social impact by solving market failures and creating opportunities to add social value (Nicholls, 2006). Ebrashi (2013) highlighted the opportunity identification process of social enterprises that explore ideas, launch organization, social outcome and impact, growth of organization and measure success of the enterprises. Value creation of social entrepreneurship has extended by main types in economic and social value (Dees and Anderson, 2003; Hervieux, Gedajlovic, and Turcotte, 2010; Kind, 2015) and another arguments which social entrepreneurship creates value in profit, people and planet (Cohen, Smith, & Mitchell, 2008). Moreover, triple bottom line concept is employed by social enterprises that quality, cost and time create economic value, social partners and stakeholders create social value (Wilson, 2015) with sustainable development that are satisfying present needs while protecting resources to the future generation (Brundtland, 1987). Sri Lanka is facing various kinds of social issues like lack of access to education at all levels, unemployment, under-employment, lack of access to healthcare, lack of food security etc. Find a niche and start-up social enterprises with innovative solution to tackle those issues is paramount (Thursday, March 22, 2018 Sunday Leader).

Overview of Social Entrepreneurship in Sri Lanka

Models and theories of social entrepreneurship is novel concepts within Sri Lanka and social entrepreneurship has no long history in the country. However, Sri Lankans have performed social welfare activities since kings' era. Public sector, co – operatives, charities and community- based organizations are taking actions that are alleviating social problems in the country which includes

providing water and irrigation facilities, health care units, electricity units and employment opportunities. Contemporary micro, small and medium sector entrepreneurs, young generation and women have a desire for continuing social enterprises. Although the nation has no legitimacy for social entrepreneurship, the government facilitates for social entrepreneurship sector by empowering social entrepreneurs in the country and growing higher education system in Sri Lanka to conduct entrepreneurship courses within universities which University of Ruhuna, University of Kelaniya, Uva wellassa University, University of Sri Jayawardenapura and South Eastern University (Of et al., 2016). Moreover, with expanding formal social enterprise sector in Sri Lanka, British Council in Sri Lanka, Oxfam, ICE/Overseas/ (Italy), CARE International/ Chrysalis, Good Market, Lanka Social Ventures, Lanka Impact Investing Network, Social Enterprise Lanka and Avishkar Frontier Fund/ Intellicap are acting in key roles to develop social enterprises in the country (Lanka Social Ventures, 2018).

Social Entrepreneurial Motivation

In international background, most of the scholars have explored social entrepreneurship sector in their studies (Bloom & Smith, 2010; Dacin et al., 2010; Ghalwash et al., 2017; Mair & Martí, 2006; Roper & Cheney, 2005). Motivational factors to start social enterprises have been examined within social entrepreneurship studies (Aileen Boluk & Mottiar, 2014; Ghalwash et al., 2017; Omorede, 2014) by generating another path of social entrepreneurship. Bloom and Smith (2010) investigated the factors driving to social entrepreneurial impact in United State by selecting three organizations by providing guidance to social entrepreneurship's theoretical and empirical work. The study developed by Mottiar and Boluk (2014) has investigated additional motivations to start social enterprises apart from social interests in South Africa and Ireland by studying six entrepreneurs with indicating additional motivations of social entrepreneurship includes generating profit, receiving acknowledgement, lifestyle motives and respect to business ventures. Omorede (2014) examined the motivational drivers of social entrepreneurs in Nigeria by focusing ten individuals who were in social entrepreneurship sector in a Nigerian context by discussing local conditions, individual's international mindset generating from social networks and individual's passion and motives to enter social enterprises. The study developed by Ghalwash, Tolba and Ismail (2017) focused that regarding motives to social entrepreneurship by analyzing five social entrepreneurs in Egypt and confirmed that characteristics of social entrepreneurs as risk takers with entrepreneurial mindsets, perseverance and social networks, previous personal experiences, social problems and challenges are initiatives to social enterprises. Mody, Day, Sydnor and Jaffe (2016) explored motivations for social entrepreneurship using Max Weber's typology of rationality by investigating two social entrepreneurs of tourism sector in India and found that behavior of social entrepreneurs in formal and substantive rationalities and the way creating their own identities by social entrepreneurs. Pangriya (2019) found that unique ideas and innovation to solve social issues, self-transcendence, inspiration and personal experience motivate a person to become a social entrepreneur in India.

Research Methodology

Research Design

Ontology, epistemology and methodology are research paradigms that discuss physical reality to inner reality of the research. Reality of the world known theories and findings by the research are included to research paradigms. What is reality and how it is a reality are focused on ontology and epistemology is focused on known things of the world, human beings and relationship between human beings and subjective knowledge (Gupta & Awasthy, 2015). The research study should be applied positivism or interpretivism to distinguish the research paradigms that positivism indicated natural science includes theories laws and interpretivism indicated subjective form of knowledge

includes human beings and their relationships (Gupta & Awasthy, 2015). Exploratory studies are used in inductive research approach and the scholars who discovered about motivational factors to start social enterprises in various backgrounds have utilized inductive research approach for their studies (Ghalwash et al., 2017; Omorede, 2014). The study is developed on inductive research approach because the study aims to generate knowledge about motivational factors to start social enterprises in Sri Lanka. The study has applied epistemology interpretivism philosophy to discover “What are the motivational factors to start social enterprises in Western province of Sri Lanka”. Western province of Sri Lanka is selected for the study, because it consists of 5.8 million population (Thousands and Lanka, 2017) higher than other provinces in the country. High population rate in the Western province has created regional disparities among other provinces with transportation, communication, health and education facilities. Moreover, healthy environment for new ventures and entrepreneurs are shown in western province and majority of entrepreneurs create their enterprises based on Western province. However, high population of western province has generated different social problems including the emergence of squatters and slums, environmental pollution, inadequate access to basic needs and natural hazards. Based on these issues, social entrepreneurs in Western province have established social enterprises to solve emerging social problems speedily than social entrepreneurs in other provinces as emphasized by Lanka Social Ventures (Lanka Social Ventures, 2018).

Data gathered from social entrepreneurs is focused on their inner life and it is difficult to measure in quantitatively. Due to these reasons, the study has used qualitative research method for the study. Qualitative data provides *“thick descriptions that are vivid, nested in a real context, and have a ring of truth that has strong impact on the reader”* (Huberman & Miles, 1994).

Sample and Data Collection

Western province has nearly 115 formal social enterprises among 400 Sri Lankan social enterprises by showing highest percentage for number of social enterprises in Sri Lanka (Lanka Social Ventures, 2018). Researches have obtained details about social entrepreneurs in Western province of Sri Lanka from a consultant and a leading social enterprise and selected six main social entrepreneurs in Western province who provide major contribution for the social entrepreneurship in diverse sectors by creating and operating social enterprises in Sri Lanka. The sample consists of six social entrepreneurs selected from Colombo, Kalutara, and Gampaha districts of Sri Lanka.

First, the scholar has made contact with social entrepreneurs by telephone calls and email. Moreover, the scholar participated in meetings to interview social entrepreneurs at a time separately each entrepreneur on allocated appointments. In-depth interview technique was used to understand the real situation of the respondent (Gupta & Awasthy, 2015). Data collection started from in-depth interviews of social entrepreneurs from 15th of February in 2019 by using face to face interview method. First Social Entrepreneur (SE) was interviewed on 15th of February in 2019 from 11.00 am to 1.00 pm and second SE was interviewed from 3.00 pm to 4.45 pm. Third and fourth SEs were interviewed on 19th of February 2019 from 9.30 am to 11.15 am and from 12.30 pm to 2.30 pm. Moreover, fifth SE was interviewed on 21st February 2019 from 3.00 pm to 5.15 pm. Sixth SE was interviewed on 25th of February 2019 from 9.00am to 11.00 am. Furthermore, recordings and notes were used within each interview by the scholar with the permission of the respondents.

Field observation was also used to get a better understanding of the phenomena. Owners and employees of the business were the respondents and interviews were taken place at their business premises following a site visit. The entrepreneurs explained the story of their social business journey.

Data Analysis

Case study approach is a unique approach to analyze natural context data that the researcher should be involved in individual cases interactively within the study (Gupta & Awasthy, 2015). Single case study or multiple case study can be utilized in case study approach by specific context (Zainal, 2016). Moreover, Case study strategy is used by most of the scholars to gather data for their studies as a proper method (Authors, 2016; Jones et al., 2008; Lyon & Fernandez, 2012; Richards & Reed, 2015; Whitelaw & Hill, 2013). Based on these reasons the study used multiple case studies to analyze through narratives. Case study method was applied since case studies assist to get a thorough investigation of a real business scenario (Yin and Campbell, 2003). Furthermore, Case studies have gained increased reliability in the previous years, especially for this kind of in-depth research (Schaper, 2005).

Results and Discussion

Table 1: Profile of Respondents

Social Entrepreneurs	Year of business est.	Social Sector	Motivation
1	2017	Agriculture Produce eco-products & provides employment for villagers	Family business background Identify a social problem Education & experience Creative thinking Religiosity
2	2014	Business development service for social entrepreneurs	Family background (father was a social activist) Working experience (worked in a charitable organization in UK) Engaged with community research and identify social issues, Networks, Vision, creative thinking, Leadership, Altruism
3	2015	Empower women and disables in poor families through craft work	Social problem Family support Social networks Altruism
4	1998	Produce eco-products from natural waste (cane, bulrush, corn shale, banana leaf sheath etc.) and provides employment for women	Education and experience Social mission Social networks Passion Creativity and risk taking
5	2012	Produce and Export organic food while providing good income for rural farmers	Education Worked with rural farmers and identify Social problem Research

			Social networks
6	2015	Plastic recycling and up-cycling	Social problem Passion Foreign funding Social networks Creativity and risk taking

Source: Survey Data, 2019

What are the motivational factors to start social enterprises in Western province of Sri Lanka were discussed by the research study in qualitative case studies. Six social entrepreneurs were interviewed and they distinguished that social problems in the country have caused differently to start their social enterprises. First SE noted that,

“I was informed about environmental pollution in the country by media. I wanted to contribute to prevent environmental pollution in my possible caliber. Immediately, I got a solution to produce environmental-friendly products.”

Furthermore, third SE said that motivations to start-up a social enterprise came from beholding the poor and special needs of the people because they should be happy as generating income from their own effort. Third SE has entered the social enterprise sector to address poverty, women unemployment and unemployment of special needy people. Moreover, fifth social entrepreneur has established a social enterprise to generate clear solution to overcome usage of unhealthy food by presenting organic food for the market because 40% of people in work force of the country suffer from non – communicable diseases as usage of unhealthy food. Fourth SE said that,

“I was able to generate employment opportunities for house wives. They were unemployed women in the area. Some women enter to illegal activities after schooling their children. In this time period, I was able to protect mothers of school children by providing trainings in handicrafts while enclosing time to enter illegal activities. As well as this issue, I could address the problem of poverty by generating employment opportunities.”

Moreover, the second SE has addressed poverty issue of the country and he has used strategies to upgrade the poor by facilitating free services to social entrepreneurs in bottom of the pyramid. As the explanations of social entrepreneurs, social problems addressed by the social entrepreneurs has been identified as a motivational factor to start social enterprises in the study.

Unique personal characteristics were exposed by social entrepreneurs in the interviews related to their character and the researcher was able to identify their unique characteristics through discussions. Passion of social entrepreneur is a dominant factor for entering into the social entrepreneurship sector according to the second respondent. He revealed that,

“Social entrepreneurship is my sector. I wanted to create social entrepreneurs. I am a coach, consultant and international researcher. I have an objective to improve enterprises that addressed on social problems. If I support 10 social entrepreneurs, they will support 1000 of social entrepreneurs. I want to expand benefits in social entrepreneurship sector in that way.”

Sixth SE was motivated to start his venture to serve the community as he realized that plastic creates a big issue to the environment. He was very opportunistic and eager to learn how plastic could be recycled to reduce pollution. He expressed that,

“I love environment. I know that collecting plastic is a big challenge since the village communities are not well- aware of the issues of plastic. I have conducted awareness programs and taught them how to separate garbage. And also, I could get technology from Australia and provide employment for the villagers through up-cycling project.”

Fifth SE wanted to do a contribution for the society by following triple bottom line concept. Moreover, all social entrepreneurs wanted to do a contribution for the progress of society. In this situation, *passion* can be identified as a unique factor to start social enterprises. *Patriotism* was ascertained in each respondents' discussions as that is an influential factor to identify differentiation between social entrepreneurs and entrepreneurs. First respondent noted that the social entrepreneur should have an affection to the country to launch an enterprise to contribute wealth of the country. Moreover, fifth social entrepreneur, revealed that he has an interest to do a contribution for the success of the country. *Vision* has been the cause for every person's success and the social entrepreneur should have a social vision with profit expectations. According to first social entrepreneur, every person should have dreams with success and the person should have vision to do anything for the society. Second social entrepreneur said that he has a social mission that conducting sustainable social entrepreneurship sector in Sri Lanka. Further, the fifth social entrepreneur said that he has an objective to empower farmers in Sri Lanka to achieve their success through their respective power. Under their discussions, *social vision* is a respective characteristic of social entrepreneurs. First social entrepreneur is a photographer and he loves natural environment, as the first and fourth social entrepreneur had an idea to be an artist or generalist. Although third SE was unable to obtain expected positions since she has an artistic mind that she creates handicrafts by adding new value. Furthermore, fifth SE said that he got the foundation to launch business from observing vehement growth of trees in his land.

Altruism is a unique trait that is comprised to social entrepreneurs because they create social enterprise to propagate benefits within the society. According to fourth SE, she supports her apprentices for conducting handicraft sector while generating income for the people with sustainability by facilitating training programs. Fifth respondent professed that he always tries to create entrepreneur from traditional farmers for the wealth of society. Further, the third SE declared that,

"I conduct the enterprise to provide highest benefits for our members who are the poor women and special needs people. I have a goal to improve income earned by our members. As this status, I lead the enterprise without salary or any profit. Profit of the enterprise reinvest on members' welfare. We buy any products produced by our members and we provide their salaries and wages if we have profit or no profit."

Social entrepreneur should think about the society before taking decisions. In this situation, altruism can be identified as a familiar trait for the social entrepreneurs. Tolerance for ambiguities are caused to start social enterprises directly that social entrepreneur should have an ability to resign. The woman, who is the fourth respondent disclosed that she has faced lots of ambiguities in her life which includes feeding her special needs daughter, death of her husband and breast cancer problem. However, she has conducted her enterprise by overcoming those problems as a real social entrepreneur.

Skills comprised in social entrepreneurs have triggered them to start social enterprises in Western province of Sri Lanka. The social entrepreneurs should have skills that pertain to entrepreneurs as well as another different skill. Creative thinking skill is a prominent skill that mainly supports to start social enterprises because social entrepreneur starts the enterprise with social innovations that generated as a result of creative thinking. Fifth respondent asserted that,

"I did not want to be a hero. But I wanted to change social model in Sri Lanka. Although pundits have said that the farmer is a king after washing mud, the traditional farmer has no solution for their problems. To change this method, I transferred traditional farmers' lives to the entrepreneurial farmers."

Furthermore, second social entrepreneur said that he launched their social enterprise after having conducted research on social enterprise sector in Sri Lanka. He has discovered suitable methods to address social problems in Sri Lanka before starting his social enterprise to build their social

innovations. In this situation, creative thinking can be identified as a fundamental factor of social entrepreneurs to establish social enterprises. Leadership for the society is a prominent ability which was uncovered by social entrepreneurs. First respondent revealed that,

“I am leading my village on credibility of villagers. Villagers assent my decisions and suggestions because I am engaging in social welfare activities. I am a counselor in local government.”

Moreover, fourth respondent said that she is an active member in women society and administration of *Samurdhi*. Their illustrations disclosed that social entrepreneur should be a leader for the society. Conceptualization skill is another skill which should be there with the social entrepreneurs. However, they should plan for the success of the enterprise as well as society. First respondent noted that he has entered the enterprise as a result of planning that he has trained for the sector before starting the social enterprise. Third respondent declared that he has started the enterprise after research in Sri Lanka and he always searches new models to provide larger social benefit. According to them, social entrepreneurs should have conceptualization skill to plan for the wellbeing of society. Moreover, fifth social entrepreneur noted that,

“My friends, my family members thought that I was mad because I chuck a greatest position in garment field in Sri Lanka to establish this social enterprise. Clearly, I had a risk to enter this sector. But I enter the social enterprise sector by adopting risk.”

Risk adopting is a unique skill of social entrepreneur because he or she should have an ability to get responsibility on behalf of the society. Besides, flexibility for changes is an important requirement for the social entrepreneurs. Third social entrepreneur alleges that,

“I should explore methods to improve income of our members. I have a goal to obtain the highest profit by manufacturing different needle items for the enterprise while protecting sustainability of the enterprise.”

Fifth SE said that he had followed new models to change traditional farmer as entrepreneurial farmer. Further, the second respondent declared that he wants to maintain the sustainability of profit oriented social enterprise sector in Sri Lanka separately in co – operatives or other welfare societies. Those are the illustrations for the flexibility for the changes in social entrepreneurship sector and flexibility for social changes and it is a vital skill for social entrepreneurs.

Education background has affected in a considerable way in the life. The second social entrepreneur has a postgraduate doctoral degree and the fifth social entrepreneur has a Master of Business Administration degree. The third social entrepreneur has a BSc. Degree in Textile Engineering. First, and the fourth social entrepreneur has faced G.C. E. A/L examination. Moreover, the first social entrepreneur has followed an entrepreneurship course in Open University of Sri Lanka. The social entrepreneur should have a knowledge to identify social problems and solutions to address problems. In this situation, good education background can be identified as a motivational factor to start social enterprises. Religion is the spiritual thing that focus on the person to welfare activities. First SE declared that,

“I am a Buddhist. According to my religion, I’m satisfied with the things that I have. I am in my boundary. Other people have needs as me. So, I should focus social activities to share happiness.”

The third SE is a Muslim lady and the fifth SE is a catholic person. They said that every religion teaches people to focus on social welfare activities and the religion is a factor to get enthusiasm for social enterprises. However, religion conviction is a key motivational factor that causes to start social enterprises in Western province of Sri Lanka. Moreover, experiences in life can be identified as a prominent factor to obtain a temper for any person. The first respondent revealed that he worked in private company while associating top managers and responsible parties and he was able to obtain different experiences including how to lead employees, how to manage cost of the organization and how to conduct sustainable enterprise. Furthermore, the second social entrepreneur said that,

“I worked in social entrepreneurship sector as a researcher, lecturer and a trainer in a foreign country. In this time period I grabbed lots of experiences in social entrepreneurship sector. So, I wanted to start professional enterprise in social entrepreneurship sector in Sri Lanka.”

Besides, the fifth social entrepreneur is the person who has worked in garment field in Sri Lanka in top management level while grabbing various experiences in his work life to transfer cheap labor garment industry in Sri Lanka as to stainless industry. In addition to work life experiences, social entrepreneurs have obtained another prominent experience before starting social enterprises. The first social entrepreneur has an experience about intricate lives of his villagers from his childhood. Similarly, the second respondent and the fifth respondent have lived in rural areas in Sri Lanka like Eastern province, Jaffna, Hambanthota and Anuradapura. In these time periods they were able to understand motions of people in remote areas by associating them. Furthermore, the fourth social entrepreneur is a lady who has lived with the poor by identifying their lurches. Specially, she was able to search lives of special needs of people because she could participate in training programs conducted by Department of Social Services in Sri Lanka. The third respondent noted that,

“My mother worked as a volunteer in an organization which facilitated training and employment opportunities for the unemployed women and special needs people. In this time, I was able to associate special needs people and women in low income level. I wanted to start a sustainable social enterprise to serve those people continually and I entered the social enterprise sector.”

Life experiences of these social entrepreneurs can be identified as a motivational factor which made them to start social enterprise. Mainly, it should be introduced as social life experiences. The study can identify experiences of social entrepreneurs as motivational factors: work life experiences and social life experiences.

Networks and linkages affected to start social enterprises. The third and the fifth social entrepreneurs noted that they have link and networks with other social enterprises in Sri Lanka. Furthermore, they said that they had no Donor funds for their enterprises. However, the second social entrepreneur declared that,

“I worked in a foreign research institute in social entrepreneurship sector. I researched Sri Lankan social entrepreneurship context in that period. Next, I wanted to start social enterprise in Sri Lanka and I propose that alternative for my institute. As my proposal the institute facilitated fund to start social enterprise in Sri Lanka.”

The first and the fourth social entrepreneurs declared that government contribution was an essential factor to start their social enterprises. The first social entrepreneur has obtained training facilities from Kalutara Extension Center, Department of Export Agriculture, Export Development Board, Central Environmental Authority and Sri Lanka Tea Board before starting his enterprise. Moreover, he has obtained loans from Bank of Ceylon and Regional Development Bank. The fourth respondent was facilitated by *Jathika Shilpa Sabhawa*, *Samurdhi Development Authority* and National Enterprise Development authority. Volunteer services affected to sustainability of the enterprises and the second and the fifth social entrepreneurs said that foreign volunteer services have obtained from their enterprises. In this situation foreign volunteer services can be identified as a motivational driver to start social enterprises in Sri Lanka. Family background is another factor which was revealed through discussions with social entrepreneurs. The first respondent's father has had a business which was collecting and selling rubber products that facilitated employment and selling opportunities for villagers. The second social entrepreneur said that,

“I thought that my interest for social entrepreneurship sector has influenced by my family. My father was a social worker. He implemented lots of social activities.”

Besides, the fourth and the fifth social entrepreneurs declared that their fathers have provided opportunities for them to live with the people who are in the bottom of the pyramid. In this situation

social welfare activities are automatically getting generated in their minds. The third social entrepreneur said that,

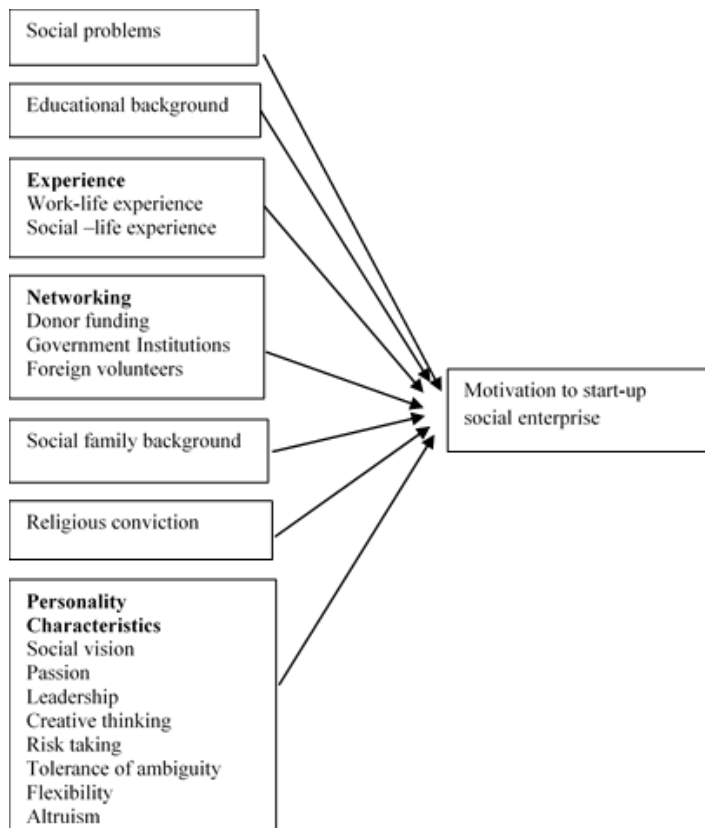
“The social enterprise has launched by my mother and my cousin. We are conducting enterprise in my father’s properties in less overhead cost. I have two sisters and both of them are contributing to marketing and training programs of the enterprise. Actually, the enterprise is a goal of my mother. I entered to conduct the enterprise as motivation of my family.”

Only family background was not declared in the illustrations of social entrepreneurs. All social entrepreneurs have noted that family background with social welfare activities is essential to start social enterprises. It can be distinguished as a social family background that is a motivational factor to start social enterprises in Sri Lanka.

The result of research study has found what are the motivational factors to start social enterprises in Sri Lanka. Social problems addressed by the social entrepreneurs, personality factors of social entrepreneurs and social factors of social entrepreneurs have been identified as motivations to start – up social enterprises. Personality characteristics, educational background and work life experiences are personal factors of the social entrepreneur. Social family background, social life experiences and networks and linkages have affected to start social enterprises in Sri Lanka that were considered as social factors of the social entrepreneur. The study has identified another motivational factor as religious conviction of the social entrepreneur. Findings of the study is indicated in figure 1.

Based on the findings of the present study, they were partially harmonious with what Ghalwash, Tolba and Ismail (2017) have found. They have identified that social problems and challenges, inspiration, previous personal experiences and social networks as motivational factors to start social enterprises. However, their study was not focused on personal characteristics and skills of social entrepreneur, social family background, education background and religious conviction as motivational factors to start social enterprises. Furthermore, Omorede (2014) have examined mainly four factors as motivations to start social enterprises including local conditions, international mindset, passion for a cause, and social network support. Moreover, Boluk and Mottiar (2014) have indicated additional motivations to start social enterprises by finding only three factors which are life style, acknowledgment and entering a network, profits and financial viability. In a nutshell, findings of the aforementioned previous studies are partially compatible with the results of the present study.

Figure 1: Motivational factors of starting social enterprises in Sri Lanka



Source: Survey Data, 2019

Conclusion and Implications

The core findings of this study propose that various motivational factors were affected to start social enterprises in Sri Lanka. So far, there is a dearth of empirical research on the motivational factors of social entrepreneurs' in Sri Lanka as well as in emerging economies. Social problems, social family background, networking, working experience, religiosity, and personality characteristic were identified as motivators to start social enterprises in Sri Lanka. Therefore, this study attempts to fill this gap and make contribution by providing useful information for further research in this area. Moreover, this study might be useful for future researchers to conduct deductive research.

The study was able to identify motivational factors to start social enterprises in Sri Lanka. Moreover, the study was able to identify different issues in SE sector in Sri Lanka as lack of awareness of the people, insufficient government contribution, lack of infrastructure and lack of linkages and networks in the sector. In Sri Lankan context, social entrepreneurs who have a passion would progress in the field. Further, social enterprises should have formal registration and other legal requirements. Moreover, the government should facilitate healthy environment for social entrepreneurs in the country by providing infrastructure facilities and awareness programs. Public – Private partnership is another beneficial method to develop social enterprises in Sri Lanka that can be attracted donors and volunteers for the enterprise. Social entrepreneurship education is another solution to develop Social entrepreneurship sector that should be addressed subject streams of universities, schools and other academic institutes to create social entrepreneurs. Moreover, research studies in social

entrepreneurship sector should be developed in Sri Lanka to add new knowledge to fill the research gap.

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Exploring the Social Innovation and Sustainopreneurship Developing Barriers in Sri Lanka

Perera, K. J. T.¹ and Abeysekara, R.²

The interconnection between innovation, entrepreneurship and sustainable development is a subject of immense concern these days, as society is considering for answers leading to sustainable development. Further, Social Innovations play a significant role in the development of Sustainopreneurship in the context of sustainable development. Given this context; this study investigates the Social Innovation and Sustainopreneurship developing barriers in Sri Lanka. The Multiple case study method was used, and data were collected by conducting in-depth interviews with fifteen Sustainopreneurs in Sri Lanka. The findings of the study reveal that there are several barriers for developing Social Innovations and Sustainopreneurship, such as competition arise from non-sustainable businesses, lack of government support, high price, and people's attitude towards the Social Innovations and Sustainopreneurship. As there has been a dearth of research conducted on this area, this study contributes to the Social Innovations and Sustainopreneurship literature. The recommendations provide useful information to policymakers and practitioners, who should help to inform future strategies in this field.

Keywords: *Entrepreneurship, Multiple Case Study, Sustainopreneurship, Social Innovations, Sustainable development*

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¹ Department of Management Sciences, Uva Wellassa University, Sri Lanka.
(jamitperera@gmail.com)

² Department of Finance, University of Kelaniya, Sri Lanka. (ruwanab@kln.ac.lk)

Introduction

The area of sustainability has received improved interest from academics and practitioners in recent years. In the beginning, much of the writing on this field came from the field of spirituality, environmental sciences and philosophy. Berry (1988) and Van der Ryn and Calthorpe (1985) present their ideas for communities and sustainable earth. Bernstein (1976) and Chivian (1993) show the sustainability from the perspective of political theory and health sciences, respectively. Recently the management arena has begun to welcome the research on sustainability.

Accordingly, Hawken (1994) has received massive support for the *Ecology of Commerce: A Declaration of Sustainability* book which was widely influential for his vision for a restorative economy. Some other notable publishers as Walley and Whitehead (1994) and Biddle (1993), have involved to connect business objectives with being “green”.

Similarly promising are published case studies of large industrial corporations who have made sustainability the main thought in their corporate strategies (Wei-Skillern, 2003). Sustainability has become a broader concept over the years and has become further closely related to Corporate Social Responsibility (CSR).

Nevertheless, sustainability and CSR are not the same terms. Sustainability, as a term, has grown favor in recent years because it well expresses the need to address the vital difficulties faced by the world today. At the individual company level, sustainability is frequently characterized and operationalized as meeting the Triple Bottom Line, i.e., simultaneously accomplishing economic, environmental, and social goals (Choi & Gray, 2008).

Meantime, the term Social Innovation has become a familiar phrase in current years, and in the study of innovation Social Innovation has risen as a new theme. It has been considered a developing research field (Souza, Lessa, & Lázaro da Silva Filho, 2019). In the literature, some of the findings explore the link between Social Innovation and sustainability, and only some of them explore their reciprocal links, i.e., CSR and Social Innovation (Osburg, 2013) or Social Innovation and the social aspect of sustainability (Parra, 2013). Indeed, especially in innovative start-ups and simultaneously in the entrepreneurship domain the relationship between Social Innovation and the three specific pillars of sustainability has not yet been analyzed.

(Piccarozzi, 2017). Osburg (2013) declares that “Social Innovation is like the core business of what is commonly thought of and the vital for companies to achieve corporate sustainability and therefore meet the needs of Triple Bottom Line reporting.

It is not the novel CSR, and it offers vast possibility for the future. In next decades, the leading companies will be the companies who will completely embrace corporate sustainability through driving Social Innovations. “We are only at the very beginning now” (Osburg, 2013, p. 21). Overall, there has been few works on the interface among sustainability or Social Innovations and entrepreneurship (Kardos, 2012). One exclusion has been the area of “social entrepreneurship”, which works with the beginning of non-profit organizations and government or community-supported agencies to address the issues of social welfare (Thompson, Kiefer, & York, 2011).

Gerlach (2003) talks about the need for considering the analysis of the role of Sustainopreneurs for implementing sustainable development from the viewpoint of innovation. The attention remains on innovations that boost sustainability (Gerlach 2003, as cited by Yoon & Tello, 2009). When entrepreneurial performers achieve competitive advantages, successful social innovation is accomplished i.e., economic success by using innovative social practices and/or environmental. Meanwhile, Sustainopreneurship is gradually realized as a driving force for competitiveness, innovation and entrepreneurial spirit, therefore, are seen as one of the main to accomplishing sustainable development (Sullivan Mort, Weerawardena, & Carnegie, 2003). Piccarozzi, 2017 shows

that innovative start-ups explicitly pay attention to Social Innovation and sustainability in different ways according to the social impact assessment document.

Meantime, researchers show that the link between Social Innovation and Sustainopreneurship is not completely defined in institutional and academic literature (Torres-Valdés, Castro Spila, Lorenzo Álvarez, & Santa Soriano, 2017). Overall, the emergence and development of innovative firms are vital for fundamental change towards sustainable development. Countries with lower performances in terms of innovative entrepreneurship have minor results of sustainable development.

Evidence show that countries like Indonesia, Vietnam, China, and India are coming up in the Global Development Index as per the Global Innovation Index.

Sri Lanka also can scrutinize their experiences and strategies to attain their development goals and it will help Sri Lanka to develop an entrepreneurial culture along with innovation and creativity.

Though Sri Lankan entrepreneurs have marketable business plans and very innovative ideas which could be easily turned into successful ventures with sustainability in the long run, they receive zero amount of support. Moreover, the Sri Lankan entrepreneurs get discouraged in no time, because of the naive supporting system.

The difference in defining entrepreneurship creates some matters in assessing the innovativeness of a country in an important manner. Usually, studies attempt to quantify countries entrepreneurship by measuring replicative entrepreneurship – the number of small businesses or the number of self-employed people.

While these statistics reveal a vital story about the economy, using them to define innovativeness paints a much-distorted picture. A huge number of self-employed people are involved in grunt work such as cooking, cleaning, driving etc., while most small businesses are small convenience stores that may never expand into anything more. On the other hand, innovators find a void in the market that has not been loaded and step in to do so. Hence, assessing entrepreneurship in Sri Lanka is still largely uncharted territory.

Further, Global Entrepreneurship and Development Institute (GEDi) featured Sri Lanka in the recently released annual Global Entrepreneurship Index (GEI). The country showed in the Index for the second consecutive year, however, fallen 16 places from its debut rank of 71st to place 97th in the world. In the GEI ranking Sri Lanka is not surveyed to calculate some key data values. As such, it becomes tough to state exactly how innovative Sri Lanka is, although in a more general sense it is obvious that there is still a lot of work to be done and is not a wholly accurate representation for the country due to significant methodological issues.

Therefore, in the context of Sri Lanka, the scant of empirical knowledge to guide the sustainable development needs supporting innovation initiatives and activities in business sectors, working as engines for change in the new development paradigm, to discourse both present and future challenges. Thus, it denotes that exploring the Social Innovation and Sustainopreneurship developing barriers in Sri Lanka is a notable context that demands such contemporary studies to contribute new knowledge insights towards any entrepreneurial industry. The empirical and theoretical justification found within the Social Innovation and Sustainopreneurship denotes the significant importance of further examining. Hence, the researcher examines this problem in this study and attempts to fill this knowledge and empirical gap. Therefore, the purpose of this study is to identify the Social Innovation and Sustainopreneurship developing barriers in Sri Lanka while serving as a new approach to managing the Triple Bottom Line.

Literature Review

Sustainopreneurship can be defined in a broad sense as innovative behavior of actors in the context of sustainability, counting actors from governmental and non-governmental, profit, and non-profit organizations. In a narrower sense, Sustainopreneurship is defined as the innovative behavior of single performers or organizations functioning in the private business sector that are seeing environmental or social issues as a core objective and competitive advantage. Sustainopreneurs recognize market opportunities for innovations concerning sustainability, successfully implement these innovations, and create new products or services (Gerlach, 2003). According to the question “how much is enough,” proponents of sufficiency demand a reconsidering of present consumption and production patterns. They call for changes of current lifestyles based on principles of precaution, modesty, and frugality in which they see a key to well-being (Sachs, 1999, pp.209, Huber 1995, 123 as cited by Gerlach, 2003). Thus, sufficiency focuses on Social Innovations to implement sustainable development (Huber, 1995). The radicalness of these innovations is probably limited by lacking social acceptance (Gerlach, 2003). Sustainopreneurs have been defined as innovative actors who foster the application of sustainable development. Thus, the role of Sustainopreneurs in applying sustainable development seems to be comparable to the role of promoters for the innovation process (Gerlach, 2003).

The EU Commission defines Social Innovations as “Innovations that are both social in their ends and their means Social Innovations are new ideas (products, services, and models). That simultaneously meet social needs (more effectively than alternatives) and create new social relationships or collaborations” (EU-Commission, 2012).

Social Innovation will start from an organization that recognizes and generates attention to a social issue and then develops a team that has compassion and a plan of action (Salim Saji & Ellingstad, 2016).

It can be said that the realization of Social Innovation is often based on sustainable actions and/or initiatives, but simultaneously fosters sustainability with actions and initiatives deemed to attain one or more of its pillars. Sometimes these actions have broader effects on sustainability than those expected and/or followed by innovative start-ups (for example, the connection between the social aspect of sustainability and economic sustainability). In this domain, a current study states that: “Firm sustainability-oriented innovation also creates collective benefits; this type of innovation aims to: (1) reduce the negative outcome, or enhance the positive outcome, for collecting some business activities even beyond the levels established by regulations; (2) meet the individual needs of its target market with modes (products, delivery modes, services) which also produce a significant positive impact on the community; (3) to raise the environmental and social impact of the work of other economic entities (supply chain partners, distributors, end customers); (4) drive the progressive raising of reference standards towards which all operators must strive regarding social and environmental issues”(Caroli, 2015; Piccarozzi, 2017).

The leading sustainability companies show high levels of capability in addressing global and industry challenges in a variety of areas. First, in terms of innovation strategies, they integrate long-term environmental, economic, and social aspects into their business strategies, while maintaining global competitiveness and brand reputation. Second, in the financial domain, shareholders’ demands for sound financial returns, long-term economic growth, open communication, and transparent financial accounting are served. Third, about the customers, they foster loyalty by investing in long-term customer relationship management. Product, service, process, and business model innovations are joint and focused on creating technological innovation platforms, which use natural, financial, and social resources in an effective, efficient, and economical manner over the long term of innovation life cycles. In this area, as well as serving customers, entrepreneurs need to respond to other

stakeholders by setting reliable standards of corporate governance and stakeholder engagement, including corporate codes of conduct and transparent reporting.

Moreover, Innovation concepts were initially built around entrepreneurship in capitalism with the objective of profit maximization. However, several economic crises, societal disorder, and environmental disasters have proven that innovation is not quickly diffused if entrepreneurs are unaware of sustainability. Entrepreneurial firms are not only vital to sustaining their customers but also their stakeholders (Savetpanuvong et al., 2011). Choi & Gray (2008) found that many Sustainopreneurs are an unusual breed with limited business backgrounds. Most obtain financing from non-conventional sources and employ unorthodox; however, sound human resource management practices they are shrewd in their marketing strategies and useful in running efficient, environmentally sound operations. Further, they find innovative methods for balancing their financial goals against their objectives of making a difference in their environment and society (Choi & Gray, 2008).

Methods

Research Philosophy and Logic

By considering the characteristics of the two contrasting views, social constructivist approach is reasoned to be more suitable for this research. As set out in the objectives, aim and questions, the study aims to explore the Social Innovation and Sustainopreneurship developing barriers in Sri Lanka while serving as a new approach to managing the Triple Bottom Line. The research wants the researcher to be a part of the environment, and that reality is created with and through the relationships or interactions in the environment. Furthermore, it is assumed that there is a multiple reality and no preexisting one. Therefore, this invalidates the strong embracing positivistic approach with inductive reasoning.

Research Approach

Since research on the Sustainopreneurship is still in a nascent stage, research is conducted as a qualitative study with a multiple case study approach. Given the lack of research in this area, an exploratory approach is appropriated. In this research, questions seek to explain the more present circumstance of “how” and extensive in-depth description of the social phenomenon. Even though the researcher answers the “what” type of exploratory questions it does not control the behavioral events (i.e., the researcher does not control the behavior of Sustainopreneurs) and focuses on a contemporary event.

According to this research, if all or most of the cases provide similar results, there can be substantial support for the development of a preliminary theory that describes the phenomena. Hence, the multiple case study approach is chosen for the study as this research required to explore the role of Social Innovations in developing Sustainopreneurship in Sri Lanka.

Data Analysis

Qualitative data was analyzed via the “Thematic” analysis. As there are relatively small and manageable number of data set manual coding was used. Moreover, the researcher does not use a structured questionnaire that generates answers consistently. Furthermore, researcher identifies the themes based on the sources and then creates nodes in Nvivo in manual coding. The researcher then drags and drops applicable references (i.e., quotations) to manually created nodes (Abeysekera, 2016). Concepts/themes emerged when data was being analyzed, which were different from the themes identified by the software based on common words/similarities in the interview transcripts. Therefore, manual coding was selected.

Findings of the Study

Referring to the research objective “to explore the barriers in developing Social Innovations and Sustainopreneurship in Sri Lanka,” several questions were made and answers of respondents were evaluated considering fourth theme analysis.

Competition Arise from Non-Sustainable Businesses

The finding shows that one of the main barriers faced by Sustainopreneurs is the competition generated due to the non-Sustainopreneurs. Moreover, typical businesses are mainly running with mass production and they are benefited from the advantages like economies of scales while Sustainopreneurs are mostly run with small scale production. That also led a high competition for the Sustainopreneurs.

The Sustainopreneur in SEO-12 stated that

“Commercializing new products is difficult since locals are more concerned about economic value than the environmental and social value. However, when we are coming with something sustainable and Social Innovation, it's challenging to provide that as same as the other product prices, which are not sustainable or innovative. So the competitions given by non-Sustainopreneurs are really high. They can use whatever materials.... but as Sustainopreneurs, we concern about the environment, so we have to compete with non-Sustainopreneurs.”

Respondent SEO-12, Personal Interview, 2019

Further, they have mentioned that in a country like Sri Lanka, anything can be sold through marketing, which many of the Sustainopreneurs are not in a position to do a high level of marketing. Most of the Sustainopreneurs do not want to market and publicize that they are doing something sustainable and they are doing Social Innovations. Their attitude is that they are doing it for them to know and where there are trying to operate in a way that they feel leave the planet better off than when they started and that has always been their goal. So, Sustainopreneurs are just doing things how they should be done and hopefully in a way that helps the planet.

Government Support

The findings reveal that there are no proper government supports or policies to support the development of Social Innovations and Sustainopreneurship in Sri Lanka, which affects the development of Sustainopreneurship. The interviewees stressed this point and the following is one of the quotations to substantiate this.

The Sustainopreneur from SEO-8 said that

“(Laughing) actually I was working at the government institution, a national department. 1 year before, I gave up the position. And they don't even want to handle it. They are totally differing. A very old model that they are working on. It is not about now; it is not about the future. They are not a part of the future. They will not change. We have to change.”

Respondent SEO-8, Personal Interview, 2019

Further, the findings reveal that the most significant barrier faced by Sustainopreneurs is the Sri Lankan policy at this stage. Because as Sustainopreneurs they have done many ground work instead of waiting for the government or anybody else. Moreover, people's behavior to adapt to this system and the government regulations works as a barrier to develop the Sustainopreneurship in Sri Lanka. This is evidenced by the below quotations as well.

Even though government institutions can help mainly for the development of Sustainopreneurship and for the Social Innovations, government has not recognized these. That may mainly due to the

unavailability of information in one place and lack of integration in the networks which entrepreneur seek help for.

High Price

The findings show that when entrepreneurs concern about the sustainability, prices for all the input materials will be high and also the manufacturing processes as well. Hence, they have to market their products for high prices than non-Sustainopreneurs. As an example, the organic farmers cannot provide their vegetables to the market as the same prices as the non-organic vegetables. In Sri Lanka, wealthy people even would come and buy their food in organic but in middle level range people when they use to come and buy they use to buy bit of vegies especially for their children's or for their grandchildren's. This is because they know the value of this product, eventhough they do not have a lot of money and organic products are usually hundred percent more expensive than the non-organic vegetables in the market. This is evident from the following quotation.

The Sustainopreneur from SEO-6 stated that

“Initial capital (laughing) so it is money. Finding the right partners towards with collaborations even figure where to sell your products, whether the consumer would want it because you can be pumping so much money. But if the consumers are not buying you'll be at a loss.”

Respondent SEO-6, Personal Interview, 2019

Thus, it is clear that the high prices of Sustainoprenarial products affect the development of Sustainopreneurship negatively.

Peoples Attitude

Moreover, it was found that people's learning methods such as education system, unstable government policies, taxation, and lack of support to encourage innovations are the main barriers to the development of Sustainopreneurship. The study also reveals that a lack of integration in networks and the educational system also works as a barrier to the development of Sustainopreneurship. The education system should be improved especially in order to develop the attitude among younger generations. Interviewees highlighted that education system needs to incorporate these Social Innovations and all these sustainable concepts to the educational system through that Sri Lanka can change the peoples' attitude then they will do something to this country which will create some Sustainopreneurs who will come up with many Social Innovations to develop Sustainopreneurship in this country. This can be supported by the following quotations.

The Sustainopreneur from SEO-10 stated that

“Anything can be sold in Sri Lanka through marketing, but for our business, we are not in a position to do that level of marketing. Because to penetrate this concept among the customers, we need marketing, but currently, we do not have it. Also, a customer and attitude is another barrier with the education system these attitudes should be changed. People should change their attitudes they need to think about the society they need to think why we need to think about sustainability then they will value these concepts.”

In terms of barriers, it is mainly the people's behavior to adapt to this system and the regulations. Moreover, it shows that most of the foreigners' have good attitudes than the locals. Due to that attitude gap, it is difficult for the Sustainopreneurs to address the local market.

Discussion and Recommendation

The finding of the research shows that there are many barriers in developing Social Innovations and Sustainopreneurship in Sri Lanka. However, as the Sustainopreneurs mention that barriers are getting

less and less when compared to the past. The most significant barrier is the Sri Lankan policy at this stage. They need some policy-level support. For example, they need legal recognition for Sustainopreneurs and they need unique funding mechanism, and they need to develop stuff like social stock exchange, impact bonds. So there are advanced instruments and tools that sustainable enterprise used in other countries which Sri Lanka also can apply. Thus, in order to develop these things, Sustainopreneurs need the support of the policymakers, the government, and parliament and so on.

The findings are largely consistent with the literature. Sustainability and Sustainopreneurship is made possible with availability of information on linkages between entrepreneurs and government institutions as well as government policy. Previous scholars show that the government institutions and the public are the major linkages between entrepreneurship and business management and are critical for attaining sustainable development goals and achieving economic growth (Adams et al., 2012).

Many of the interviewers complained that the other barrier is that the existing business world in Sri Lanka is not taking this up or promoting it. They are very selfish and short term so they are not promoting sustainability. Though Sustainopreneurs are doing long term in a genuine way where other business leaders around the world are doing.

Moreover, the finding shows the Sri Lankan education system as the main barrier to the development of Social Innovations and Sustainopreneurship. Their idea is that the education system is not producing citizens who are entrepreneurs including higher education. They highlight that most of them are not getting responsibilities, try to blame others, and like to pass the blame to others, blame the system and blame the government, etc. with the attitudinal issue.

Moreover, the other thing is that even though many things are happening in the country, the only thing is that the responsible bodies should take necessary actions to map these things and highlight them and get toward those. This is not happening currently. Though places like good markets are doing well, considering the requirement of the development of Social Innovations and Sustainopreneurship in Sri Lanka, those can be considered as a small platform. Moreover, Sustainopreneurs highlighted that Sri Lanka need more than hundred platforms in this country. If someone or the government can start another platform, they are very happy to support and contribute their maximum to the success of that platform. Since there are things that need to come, only a single business model cannot play a massive role in order to develop this Sustainopreneurship and Social Innovations in this country, and everybody needs to play an equal role in blooming up these new thinking.

Moreover, other findings revealed that though the numbers of innovations are generated, the commercialization aspect is not functioning accurately due to the political instabilities and other external forces in Sri Lanka.

Another finding reveals that people's attitudes should be changed as it is the main barrier for the development of Sustainopreneurship and Social Innovations. Literature also confirms that the Sustainopreneurship should contain attitude toward sustainability, since attitudes, which are molded by value priorities, shape intentions and the subsequent behavior (Fischer & Schwartz, 2011).

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Study on the Impact of National Policy Framework on the Performance of Small and Medium Enterprises (SMEs) in Gampaha District

Bandara E. W. N. D.¹, Perera, K. H.² and Madushika, H. P. K.³

SMEs in Sri Lanka steers Sri Lankan economy as they increase gross domestic product and the employment opportunities. With the past statistical data, it was indicated that a mixture of success and failure are faced by SMEs as a result of current economic situation. So as a supportive partner, government has given number of opportunities and reliefs to overcome the failures faced by SMEs. Hence, the main purpose of this study is to investigate the effect of national policy framework on the performance of small and medium enterprises in Gampaha District, Sri Lanka by analyzing the national policies formulated by the Sri Lankan government. Data were collected using questionnaires and interviews for the study. It was found out that there is a significant relationship between National Policy Framework and SME's performance in Sri Lanka. The study will provide guidance to all relevant authorities including the government of Sri Lanka in identifying the application of policies designed and in making corrective actions. Further, this study offers some relevant recommendations to policy makers to implement better policies which are more favorable for business owners.

Keywords: *National Policy Framework, Performance, Policy, SMEs*

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¹ University of Kelaniya, Sri Lanka.

² University of Kelaniya, Sri Lanka.

³ University of Kelaniya, Sri Lanka.

Introduction

SMEs are known as the key economic sector in both developed and developing economies when compared with other sectors (Altenburg & Eckhardt, 2006). Sri Lanka being a developing country (Gunawardhana, 2016), growth of the Small and Medium Enterprises has become significantly important fact in the present economy. Majority of firms that exist in current world are SMEs and it is a common fact that they play a significant role in every economy (Brush & Vanderwerf, 1992) as they serve as an initial source of motivation for economic power. Over 90% of the establishments in the country with an engagement of around three million people show the importance of this sector (Gunawardhana, 2016). The SMEs play a vital role in the economy and employment in any country. In accelerating economic growth, SMEs need to be strengthened as they have a paramount importance to the developing economies like Sri Lanka as it helps to mitigate discrepancy that lies between the rich and the poor. It can be considered as the back bone of national economy (Mazanai & Fatoki, 2011). This study intends to discuss to which extend the National Policy Framework in Sri Lanka for SMEs impact their performance.

Government of Sri Lanka (GoSL) has identified SMEs as the engine of the economy, as it accounts for more than 75% of the total number of enterprises, provides 45% of the employment and contributes to 52% of the Gross Domestic Production (GDP). They provide more opportunities for women and youth by providing number of reliefs for them while contributing to the economic development of the country.

SMEs in Sri Lanka

In Sri Lanka SMEs include enterprises with lower than 50 people and capital investment less than 5 million rupees (Department of Small Industries) and an enterprise with less than 8 million rupees investment and less than 50 million rupees annual turnover (Export Development Board). In global perspective, World Bank states that if any enterprise has people count of below 99, it can be defined as a SME.

There are 1.017 million establishments in SME Sector in Sri Lanka according to the economic census (listing Stage) of 2016 conducted by the Department of Census and Statistics. The growth and expansion of SMEs are constrained by problems emanating from product and factor markets and the regulatory system they operate in. These problems fall into broad areas of access to finance, physical infrastructure, level of technology, regulatory framework, access to information and advice, access to markets, business development services, industrial relations and labor legislation, intellectual property rights, technical and managerial skills, linkage formation and environmental issues (Gunawardhana, 2016). High interest rates and the emphasis on collateral by lending institutions are the most frequently cited constraints affecting SME development. The inadequacy of skills in product development, packaging, distribution and sales promotion are further areas of weakness. Difficulties in accessing information and markets are also highlighted. Compounding these difficulties, the prevailing business and regulatory environment raises costs and creates unnecessary hurdles. (D.P.Gunawardana, 2016). These problems are well known and highlighted in every study and successive governments have made many attempts to mitigate them. However, no significant change is seen.

National Policy Framework in Sri Lanka

The present National Policy Framework of Sri Lanka for SMEs is prepared by the Ministry of Industry and Commerce with the collaboration of Ministry of Rural Economic Affair, Ministry of Finance, Ministry of Science, Technology and Research, Ministry of Environment, National Enterprise Development Authority, Central Bank of Sri Lanka, Department of Census & Statistics, Sri Lanka Standards Institute, Research Institutions, State and Private Sector Commercial Banks, National and Regional Chambers. It is now the duty of the responsible entities to ensure that the activities of the plan are implemented effectively and efficiently within the time frames defined in

the interest of the country. This SME Policy Framework will broadly set out the policy direction, the challenges to be addressed and the broad intervention strategies. The major policy intervention areas are identified into six core areas as follows;

1. Policies relating to starting of the business
2. Policies relating to modern appropriate technology
3. Policies relating to entrepreneurial culture and skills development
4. Policies relating to access to finance
5. Policies relating to market facilitation
6. Policies relating to research and development

Research Gap

In Sri Lanka, despite SMEs being a key vehicle for economic success, having the potential to provide employment opportunities to the thousands of the unemployed and having the capacity to contribute to Gross Domestic Product (GDP) as well as poverty reduction, the sector is still in a poor stage.

With all policies and frameworks formulated and adopted by the GoSL, SMEs are not performing creditably well and not playing a vital and vibrant role in the economic success and development of Sri Lanka. SMEs have their unique issues, despite from the available national policies. Therefore, it is required to study the actual impact of those available policies.

As such, this study will be conducted to find answers for the following main problem;

‘What is the impact of ‘National Policy Framework for SMEs’ on the performance of Small and Medium Enterprises (SMEs) in Gampaha District?’

Research Objectives

The main objective is to explore whether the National Policy Framework for SMEs in Sri Lanka is effective in regulating the performance of small and medium enterprises in Gampaha District, Sri Lanka. Specific objectives included, to identify the relationship between the identified 6 core areas to performance of SMEs and to recognize the area that is mostly affecting to the performance of SMEs.

Significance of the study

The study discusses the impact of National Policy Framework for SMEs for the performance of SMEs in Gampaha District. The findings of this study would be important to policy makers 'especially in SME sector and would help them to implement better policies which are more favorable for business owners. Further this study will be important for economists to make decisions on the performance of SMEs and to identify the contribution for the economy. Further government institutions like departments, ministries and boards will be benefited as they would be able to recognize the actual status of SMEs and the practicability of the policies adopted, hence amendments and improvements could be made for better results.

Literature Review

Small Medium Enterprise is one of the main considerable icons in the economy of a country as an extraordinary contribution is provided by generating huge number of employment opportunities (Birch, 1979) (Muriithi, 2017) (Vijayakumar, 2013) economic growth, introduce new business methods and products, reduce poverty, inflation and income inequality and solve the balance of payment problem a great contribution gained by SME. (Singh, Garg, & Deshmukh, 2015) . Therefore, SMEs are considered as the backbone of economic development of a country (Mazanai & Fatoki, 2011). SMEs are of paramount importance in the development of any country especially in

developing country like India Kenya as well as in Sri Lanka also .Small and Medium Enterprises (SMEs) play a pivotal role and can be considered as the back bone of national economy. (Khalique & Shaari, 2011)

SMEs provide both developed and emerging economies some relief to mitigate the vicious circle of poverty (Dasanayaka, 2014). When we focus on Sri Lankan economy, Sri Lanka accommodates to start up micro and small enterprises for socio-economic development. The 2018 budget proposals have given a prominent place to SMEs development and it has been clearly spelt out as a national policy to create a favorable investment climate to empower industrialists/entrepreneurs to deliver globally competitive products and services to the international market. The policy framework also fosters SMEs with high potential to improve their business and to realize the full potential in today's globalized economy (Gunawardhana, 2016).

The SME Policy Framework will also give special attention to maintain nature's capital, green growth, entrepreneurship development, women entrepreneurship; craft sector development, innovation and encouraging industrial clusters by strengthening enterprise villages, handicraft villages, Industrial production villages and SME industrial estates/ zones (Gunawardhana, 2016). The following paragraphs will detail the core policy areas which are stipulated in the policy framework.

Literature relating to the independent variables are discussed in detail below;

To start the business

Different researchers have identified various factors as important in starting SMEs. According to Dut & Van (2015) External environment and corruption jointly affect the performance of SMEs operating in developing country. Favorable treatment for state-owned companies, Promotion policy for private firms, Local labor force and Bribery have significantly affected for startup of SMEs. When the level of bribe is high there will be a negative impact on starting new SMEs. The other threat for the SMEs is the lack of knowledge and tools to effectively manage their performance (Fauske, Busi, & Alfnes, 2015). In Sri Lankan point of view there is a significant threat to conducting these national policies related to start the business due to the corruptions going on and lack of understanding about legislation on starting businesses. However, GoSL is making plans to improve the legislative, regulatory and institutional framework including proper coordination, simplification and rationalization of procedures to enhance the ease of doing business to improve the competitiveness and support in establishing a favorable environment for SME development (Gunawardhana, 2016).

Modern appropriate technology

Technology and entrepreneurship are vital tools used for national economies specially in developing economies like Sri Lanka towards 21st century requirement and growth (Gunawardhana, 2016). Therefore, technology adoption is very much important for the performance, profit, growth and market capturing of SMEs (Mubarak & Aruna, 2013). In the same vein, the use of ICT by SMEs opens up new opportunities, reduces inventories with the use of Information Communication Technology as well as makes their services more tradable. (Oluwafemi & Olatunji, 2015).

Actual usage of technology is instrumental for SMEs to not only improve their business performance but also significantly contribute to the national economic growth. According to (Gathogo & Ragui , 2014) Higher learning institutions could also be used for technology driven information incubation, dissemination and implementation by the SMEs. So in Sri Lanka Policy makers can build up and strengthen new policies for SMEs with more facilities for them.

Entrepreneurial culture& skills development

World Economic Forum (2009) stated that entrepreneurial training was essential for skills development, attitudes and behaviors necessary to create jobs, generate economic growth, advance human welfare and stimulate innovation to address youth related economic challenges of the 21st

century as this would be a catalyst for economic development (Nduta, 2016). Further that study implied that accessibility to training programs should be increased and any barriers to access training should be eradicated.

However, high rates of failures of SMEs are taking place due to the lack of training programs with many of the enterprises dying at an infant stage. Gunawardhana, (2016) identified lack of entrepreneurial training as a main reason for the failure of SMEs in Sri Lanka. The relevant ministries have to develop and implement a comprehensive curriculum on entrepreneurship education and training which should be integrated at all levels from nursery to university, so as to build a strong entrepreneurial culture early enough in youths (Nduta, 2016).

Access to finance

One of the most important issues of access to finance is financial constraints of SMEs (Onyiego, G S, & Waiganjo, 2017). In summary it can be concluded that access to finance are influenced by firm size, collateral requirements and sources of capital. This is supported by studies of Bieke (2005), who found that majority did not apply for loans due to lack of awareness to inadequate and ineffective market communication adopted by financial providers. In Sri Lanka it was also observed that credit boost the business; however, the SMEs do not receive the same as requested since they lack collateral or security demanded by the banks. Most critical problem in SMEs in Sri Lanka regards to access to finance is going for credit facilities to startup the business, expand business operations etc.

Access to financing was found to have positive effect on financial performance of small and micro enterprises (Murigi, 2012). By maintaining the relationships with government agencies, using Accountants and Consultants as well as attending seminars, SMEs will gain legitimacy and advice which may improve their access to debt finance.

Market facilitation

Governments have a role to play to correct imbalances to access international networks while developing the international dimension of public-private partnerships (Istanbul & Turkey, 2004). There is evidence that a group of SMEs with high-growth potential require early access to international markets to ensure their development and growth (ledgerwood, 2017). While generally SMEs report increased international business contacts in recent years, evidence suggests that relative to the contribution they make to local and national economies, SMEs remain overall underrepresented in the international economy. So local government have an obligation to create a suitable path for the achievement of market not only nationally but also internationally.

Research & Development (R&D)

The strong innovation performance is associated with well-developed R&D process. This in turn helps in the growth of internationalization, networks, various research organizations and alliances and finally the growth of the SME (Prasanthi & Sundari, 2016). The in-house R&D and innovation performance has an impact on the success of SMEs. In-house R&D seems to be particularly effective only if combined with external knowledge sourcing.

Lack of a R&D culture reduces firms' innovation performance (Muriithi, 2017). Policy instruments such as R&D grants from government agencies are more beneficial in increasing R&D investment and innovation output than R&D financing (Rehman, 2016). It is difficult for SMEs to obtain R&D financing due to its risky nature as research can take a long time to generate results.

Theoretical Review

Contingency Theory

A contingency theory claims that there is no best way to organize a corporation, to lead a company, or to make decisions. Instead, the optimal course of action is contingent (dependent) upon the internal and external situation. Certain characteristics of assets that generate sustained competitive advantage, naming them as strategic assets have been developed by Resource-based theorists. The performance of SMEs can vary with the selection of state policy adopted. The Government policy is usually effective for companies involved in high volume products. This study tries to examine at which extend the influence of National Policy Frame has taken place on the performances of SMEs.

Social Systems Theory

Social system is the patterned network of relationships constituting a coherent whole that exist between individuals, groups, and institutions. It is the formal structure of role and status that can form in a small, stable group. This theory forms the basis of this study since SMEs in this study are part of the functioning of SMEs in Gampaha District. Their achievements are supported by the opportunities presented both within and outside the markets'. These opportunities include accessibility to loans and other financial services, availability of market, education and training, technological advancement and infrastructure among other factors (Collis & Montgomery, 2007). The SME sector in Gampaha District can be considered to be an open system. The system comprises of the SMEs, suppliers and customers. The system is however governed by various regulations which include registrations, creditability and market facilitation.

Resource Based Theory

To overcome scarcity of resources experienced by organizations, SMEs need to acquire complementary external resources specially funds and search for other capabilities. At the same time, they can produce quality products with less human capital. Normally, in SMEs there is a limited access to resources and ideas, hence outsourcing allows the organizations to gather new ideas and innovations. Lack of resources means not only the physical resources but mainly in intellectual and informational resources to (Mazzarol & Choo, 2003) argue that those intangible assets such as market orientation, knowledge management and organizational learning allow firms to develop abilities that enhance competitive advantage leading to enhanced market performance. This study uses resource-based theory to explain the credit policies and the training programs held to uplift the SMEs in Gampaha District. SMEs begin with limited resources in terms of finances, human capital and assets. For them to increase their resources and capability, they need to reinvest their profits in their businesses. However, high taxation tariffs would significantly reduce the business profits, which would subsequently reduce their profits and hence their resources.

The Conceptual Framework

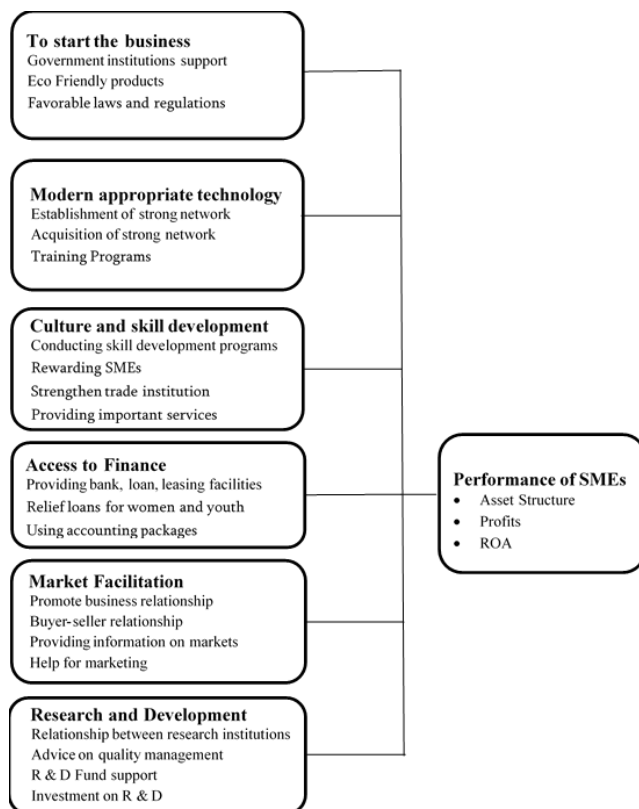


Figure 1: Conceptual Framework

Methodology

Research Design

This study employed a descriptive research design. In present study, the researcher tested the theory by specifying narrow hypotheses, questions and the collection of data to support or refute the hypotheses. The present survey study has used a cross-sectional study as it provides a snapshot of result at a given point in time. Further questionnaire and interviews for data collection were used. Quantitative data are analyzed using SPSS while a content analysis was made for the qualitative data collected through interviews.

Population

The target population consists of all SMEs in manufacturing industry operating within Gampaha District that maintains records of financial transactions that are registered in the database maintained by the Divisional secretariat in Gampaha.

Sample

The population of the research was heterogeneous. Therefore, it is divided into homogeneous sub groups using stratified random sampling. Simple Random Sampling was used to draw random samples from each stratum. Sample of the present study is derived by considering ratio contributed by each divisional secretariat division to the population. Accordingly, a sample of 68 was selected proportionately.

Reliability and Validity of the questionnaire

Table 1 Reliability Statistics

Cronbach's Alpha	No of Items
.708	47

The researcher's reliability value is greater than 0.70 which indicates that the researcher's model is in good fit for further analysis.

Researcher also has used Cronbach's Alpha for measuring validity of the questionnaire. According to the table Item-Total Statistics all the values were greater than 0.7. Therefore, all the questions of the questionnaire were valid.

Data analysis and Presentation tools

Data Analysis

Researcher has used both descriptive and inferential statistical techniques to analyze the data and included percentages analysis. Researcher used SPSS software package in analyzing data.

Data Presentation Tools

Researcher has used bar charts to present the general information of the questionnaire as well as contingency tables.

Research Hypotheses

Hypothesis 1

H1: There is an impact on enabling environment on the performance of SMEs

H0: There is no impact on enabling environment on the performance of SMEs

Hypothesis 2

H1: There is an impact on modern appropriate technology on the performance of SMEs

H0: There is no impact on modern appropriate technology on the performance of SMEs

Hypothesis 3

H1: There is an impact on entrepreneurial culture and skills development on the performance of SMEs

H0: There is no impact on entrepreneurial culture and skills development on the performance of SMEs

Hypothesis 4

H1: There is a significant impact on access to finance on the performance of SMEs

H0: There is no impact on access to finance on the performance of SMEs

Hypothesis 5

H1: There is an impact on market facilitation on the performance of SMEs

H0: There is no impact on market facilitation on the performance of SMEs

Hypothesis 6

H1: There is an impact on research and development on the performance of SMEs

H0: There is no impact on research and development on the performance of SMEs.

Table 2 Operationalization of National Policy Framework

Dimensions	Indicators	Measurement
Enabling Environment	Government institutions support	QD 1.1
	Eco Friendly products	QD 1.2
	Favorable laws and regulations	QD 1.3
Modern Appropriate Technology	Establishment of strong network	QD 2.1
	Acquisition of strong network	QD 2.2
	Training Programs	QD 2.3
Culture and skill development	Conducting skill development programs	QD 3.1
	Awards Rewarding SMEs	QD 3.2
	Strengthen trade institution	QD 3.3
	Providing important services	QD 3.4
Access to Finance	Providing bank, loan, leasing facilities.	QD 4.1
	Relief loans for women and youth	QD 4.2
	Using accounting packages	QD 4.3
Market Facilitation	Government promotes business relationship	QD 5.1
	Promote relationship between buyers and sellers	QD 5.2
	Provide information on international market	QD 5.3
	Helps SMEs to market their products	QD 5.4
Research and Development	Government has established close links between industry and research institutions.	QD 6.1
	Government provides advices on Governance of standards, and quality management.	QD 6.2
	Government has established Special Fund to support SME focused R&D	QD 6.3

	Government give support to increase investment in R&D	QD 6.4
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Source: Developed by Researcher

Data analysis and findings

Response rate

Out of the 100 questionnaires distributed, 68 have responded, resulting a response rate of 68%.

Descriptive Statistics

Most of the SMEs are carried out with the contribution of women (Table 3). Majority of the SME owners in Gampaha District were aged between 30 and 39 years (Table 4). Most small and medium enterprises are owned and mainly run by younger population in the age of late 20s and early 30s (Mbugua & Dr. Makori Moronge, 2016). Further, the respondents had G.C.E A/L as their highest level of education (table 5).

Inferential Statistics

Through this the researcher is analyzing the extent the SMEs are known and aware about the current National Policy Framework under 6 independent variables and whether those policies actually have affected the performance or the growth of their business.

Hypotheses Testing

Researcher attempts to identify the impact of National Policy Framework on the Performance of SMEs in manufacturing business in Gampaha District by using correlation analysis and percentage analysis as discussed above.

H1: There is an impact on enabling environment on the performance of SMEs

Table 3 Feedback regarding enabling environment

	QD 1.1	QD 1.2	QD 1.3
Strongly Disagree	1	1	1
Disagree	3	4	7
Moderate	12	9	11
Agree	39	43	40
Strongly Agree	13	11	9
Mean	3.88	3.87	3.72
As a percentage	57.4	63.2	58.8

According to the information majority of the respondents are satisfied with the service received from government institutions, ministries and departments to start up their business. On the other hand, the support has been given to divert into green and eco-friendly products. 63.2% of respondents agreed with the education provided from responsible institutions to produce eco-friendly products. Most of

the respondents are favorable with the existing rules and regulations, which implies that rules and regulations implemented on SMEs to start their business is more friendly and understandable for them.

So in conclusion researcher has concluded that the policies available to start up the business are sound enough for SMEs to perform well in the manufacturing industry resulting an acceptance of the hypothesis.

H2: There is an impact on modern appropriate technology on the performance of SMEs

Table 4 Feedback regarding the modern appropriate technology

	QD 2.1	QD 2.2	QD 2.3
Strongly Disagree	0	0	1
Disagree	5	6	6
Moderate	23	8	11
Agree	34	47	39
Strongly Agree	6	7	11
Mean	3.6	3.81	3.78
As Percentage	50%	69.10%	57.40%

The acquisition of latest technology and the opportunity to attend training programs held in once a month had been supportive for SMEs to continue their businesses effectively.

In conclusion policies available in National Policy framework for the modern appropriate technology have positively affected for the SMEs' performance and therefore the hypothesis is accepted.

H3: There is an impact on entrepreneurial culture and skills development on the performance of SMEs

Table 5 Feedback regarding Entrepreneurial Culture and Skill Development

	QD 3.1	QD 3.2	QD 3.3	QD 3.4
Strongly Disagree	0	1	2	1
Disagree	4	6	5	3
Moderate	6	11	18	10
Agree	40	38	36	36
Strongly Agree	18	12	7	18
Mean	4.06	3.79	3.6	3.99
As Percentage	58.80%	55.90%	52.90%	52.90%

Researcher has concluded that government policies regarding to Entrepreneurial Culture and Skill Development have positively affected for the performance of SMEs and hence the hypothesis is accepted.

H4: There is a significant impact on access to finance on the performance of SMEs

Table 6: Feedback regarding access to finance

	QD 4.1	QD 4.2	QD 4.3
Strongly Disagree	0	2	2
Disagree	6	2	6
Moderate	5	7	16
Agree	39	40	31
Strongly Agree	18	17	13
Mean	4.01	4	3.69
As Percentage	57.40%	58.80%	45.60%

The major concern of SMEs is with funding. Through the National Policy Framework government has implemented number of relief for SME owners to start and expand their current business and most of SMEs were positive on the policies available and hence the hypothesis is accepted. In conclusion researcher has concluded that available National Policy Framework for SMEs is more results driven for them for their performance.

H5: There is an impact on market facilitation on the performance of SMEs

Table 7 Feedback regarding market facilitation

	QD 5.1	QD 5.2	QD 5.3	QD 5.4
Strongly Disagree	1	0	2	4
Disagree	12	26	22	36
Moderate	24	18	17	10
Agree	26	21	21	15
Strongly Agree	5	3	6	3
Mean	3.32	3.01	3.1	2.66
As Percentage	38.20%	38.20%	32.40%	52.90%

The business relationships that are promoted by Government between large enterprises and small and medium enterprises are not aware by the SMEs. Meanwhile responders agreed with the platform provided among buyers and sellers to promote their products. Some were with the view that considerable support is not given by the government to SMEs to promote their product and capture the market.

Therefore, it is concluded that there is moderate impact on policies relating to market facilitation and performance of SMEs.

H6: There is an impact on research and development on the performance of SMEs

Table 8 Feedback regarding research and development

	QD 6.1	QD 6.2	QD 6.3	QD 6.4
Strongly Disagree	2	2	1	3
Disagree	34	30	38	29
Moderate	20	14	14	18
Agree	9	17	12	15
Strongly Agree	3	5	3	3
Mean	2.66	2.99	2.68	2.79
As Percentage	50.00%	44.10%	55.90%	42.60%

According to the analysis though there is a separate fund to upkeep the continuous progress for research and development, effectiveness of this fund is questionable. The feedback was negative on the support given by the government to increase investments in R&D.

Thus researcher concluded that government policies regarding Research and Development have negatively affected for the performance of SMEs.

Table 9. Summary of Hypothesis

Hypothesis	Description	Accept / Reject
H1	There is a positive relationship between to start the business and Performance of SMEs.	Accept
H2	There is a positive relationship between Modern Appropriate Technology and Performance of SMEs.	Accept
H3	There is an impact on entrepreneurial culture and skills development on the performance of SMEs	Accept
H4	There is a positive relationship between access to finance and Performance of SMEs	Accept
H5	There is a moderate relationship between market facilitation and Performance of SMEs	Reject
H6	There is a negative relationship between research and development and Performance of SMEs.	Reject

Findings

The findings show that access to finance has the highest impact on Performance of SMEs as financing for the business is the major problem that SMEs are facing in now a day. So the researcher recommends for the government to launch more relief loan programs and policies for SME owners when implementing new policies and further the researcher suggested to conduct more meetings with those relief loan providers and institutions to promote introducing new loans and relief loan schemes for low income businesses.

SME owners need to be provided with good training programs and skill development activities. As per the interviews had with the SME owners, they were with the attitude that training provided to them currently is insufficient. So the researcher recommended more training programs while those have to be designed in a way that would increase the participation in those programs.

As per the interviews researcher had with SME owners, it was suggested to lose the tough regulations implemented by the government. Current Sri Lankan rules and regulations are not much favorable for them to bear due to the lack of knowledge and understanding of regulatory factors. Especially the accounting capabilities of SME owners are not enough. Therefore, more training programs and workshops are required to develop accounting knowledge and practices and use of modern technology.

Further researcher was able to find following points from the interviews had with SME owners.

- Available loan schemes and seeking capital requirements are not much favorable for their business.
- Available paths to achieve the local market cannot be satisfied.
- Delivering information regarding training programs and workshops do not flow systematically.

Main objective of conducting this study is to test the effectiveness of this currently available national policy framework for SMEs. Further effectiveness or the impact is measured using 6 core areas. The results of the study imply that the 6 variables, to start the business, modern appropriate technology, entrepreneurial culture and skills development, access to finance, have a positive impact on Performance of SMEs. Further market facilitation and research and development were found to have a less impact for the Performance of SMEs.

Most importantly, this study was succeeded in answering all of the research objectives, which are aimed at analyzing the impact of National Policy Framework on the Performance of SMEs. As such, access to finance was identified as the most prominent factor affecting the performance of SMEs.

Discussion and Recommendations

Determining the National Policy Framework of SMEs was very important because the policies significantly affect the level of SME performance. Most importantly no study was carried out in Sri Lanka to test the importance and effectiveness of National Policy Framework for SMEs during the last five years. This became a constraint as well as a good opportunity to the researcher. So the researcher pointed out the availability of a policy framework is not sufficient if it is not implemented and communicated to SMEs.

In Sri Lankan perspective SME owners have much struggle with the capital requirement. This becomes a common problem in developing countries as well. The main challenge hindering SMEs was lack of collateral hence forcing them to rely on informal finance (Murigi, 2012). Reduction of cost of financing and alternative loan schemes that will not require collateral will overcome the challenges to SMEs financing challenges (Murigi, 2012). Entrepreneurship training leads to better business practices and increased revenues and profits. In Line with the findings of Bosire & Nzaramba (2013) this study identified lack of entrepreneurship training as one of the key factors that

limit the performance of SMEs. Further, training programs and capital financing influence performance of SMEs in Kenya significantly (Mbugua & Dr. Makori Moronge, 2016). So the researcher highlighted these two variables can make significant impact on SMEs performance.

Limitations of the study

Lack of the knowledge of SME owners regarding policies, time limitations to collect data were the barriers to conduct the research. In SMEs context when gathering information for the research, the researcher realized that SME owners are reluctant to provide actual & honest answers as they will become a victim of government or on the other hand they will be aggrieved by the government and they felt that researcher would reveal their personal details to the external parties.

Researcher has built up following for the further understanding.

- 2=Disagree means of negative impact for the performance
- 3=moderate means of no impact for the performance
- 4=Agree means of positive impact for the performance

According to the above table it describes which area is affecting more for the company performance. Access to finance is the core area that has most impact to the performance of the SMEs.

Future research area

According to the information gathered through interviews during the study, the researcher believes taxation, capital financing and documentation are some other important independent variables that should be included in National Policy Framework. Therefore, future research studies can analyse the effects of these factors on Performance of SMEs.

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Annexures**To Start the Business (Table 03)****Statistics**

		Ministries, Departments, Statutory Boards and other government institutions provide a quality services to us	Government educates us on green growth and eco-friendly clean products	Government enforces favorable laws and regulations for us to start the business
N	Valid	68	68	68
	Missing	0	0	0
Mean		3.88	3.87	3.72

Ministries, Departments, Statutory Boards and other government institutions provide a quality services to us

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.5	1.5	1.5
	Disagree	3	4.4	4.4	5.9
	Moderate	12	17.6	17.6	23.5
	Agree	39	57.4	57.4	80.9
	Strongly Agree	13	19.1	19.1	100.0
	Total	68	100.0	100.0	

Government educates us on green growth and eco-friendly clean products

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	1	1.5	1.5	1.5
	Disagree	4	5.9	5.9	7.4
	Moderate	9	13.2	13.2	20.6
	Agree	43	63.2	63.2	83.8
	strongly Agree	11	16.2	16.2	100.0
	Total	68	100.0	100.0	

Government enforces favorable laws and regulations for us to start the business

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.5	1.5	1.5
	Disagree	7	10.3	10.3	11.8
	Moderate	11	16.2	16.2	27.9
	Agree	40	58.8	58.8	86.8
	Strongly agree	9	13.2	13.2	100.0
	Total	68	100.0	100.0	

Modern Appropriate Technology (Table 04)

Statistics

		Government has established a strong network with technology service providers	Government assists small medium enterprises to acquire and use the latest technology	Government conducts training programmes on the use of special technologies
N	Valid	68	68	68
	Missing	0	0	0
Mean		3.60	3.81	3.78

Government has established a strong network with technology service providers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	5	7.4	7.4	7.4
	Moderate	23	33.8	33.8	41.2
	Agree	34	50.0	50.0	91.2
	Strongly Agree	6	8.8	8.8	100.0
	Total	68	100.0	100.0	

Government assists small medium enterprises to acquire and use the latest technology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	6	8.8	8.8	8.8
	Moderate	8	11.8	11.8	20.6
	Agree	47	69.1	69.1	89.7

Strongly Agree	7	10.3	10.3	100.0
Total	68	100.0	100.0	

Government conducts training programmes on the use of special technologies

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	1	1.5	1.5	1.5
Disagree	6	8.8	8.8	10.3
Moderate	11	16.2	16.2	26.5
Agree	39	57.4	57.4	83.8
Strongly Agree	11	16.2	16.2	100.0
Total	68	100.0	100.0	

Entrepreneurial Culture and Skill Development (Table 05)

Statistics

		Government has strengthened training and skill development programmes	Government is identifying and rewarding successful SMEs	Government strengthens educational institutions, industry associations, and institutions that support entrepreneurship	Government has provided important services such as project preparation and credit facilities, technical information, consultancy and quality assurance services
N	Valid	68	68	68	68
	Missing	0	0	0	0
Mean		4.06	3.79	3.60	3.99

Government has strengthened training and skill development programs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	4	5.9	5.9	5.9
	Moderate	6	8.8	8.8	14.7
	Agree	40	58.8	58.8	73.5
	Strongly agree	18	26.5	26.5	100.0
	Total	68	100.0	100.0	

Government is identifying and rewarding successful SMEs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.5	1.5	1.5
	Disagree	6	8.8	8.8	10.3
	Moderate	11	16.2	16.2	26.5
	Agree	38	55.9	55.9	82.4
	Strongly agree	12	17.6	17.6	100.0
	Total	68	100.0	100.0	

Government strengthens educational institutions, industry associations, and institutions that support entrepreneurship

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	2.9	2.9	2.9
	Disagree	5	7.4	7.4	10.3
	Moderate	18	26.5	26.5	36.8
	Agree	36	52.9	52.9	89.7
	Strongly Agree	7	10.3	10.3	100.0
	Total	68	100.0	100.0	

Government has provided important services such as project preparation and credit facilities, technical information, consultancy and quality assurance services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.5	1.5	1.5
	Disagree	3	4.4	4.4	5.9
	Moderate	10	14.7	14.7	20.6
	Agree	36	52.9	52.9	73.5
	Strongly Agree	18	26.5	26.5	100.0
	Total	68	100.0	100.0	

The Impact of Big Five Personality Factors on Employees' Career Success: Evidence from a Leading Apparel Firm, in Sri Lanka

Kariyawasam, J. D.¹ and Welmilla, I.²

Every employee wants to have a highly successful career that they enjoy, which provides them with the lifestyle they desire. Compared to many others, most employees are more concerned about their career success in the Apparel Sector. Most of the employees do not achieve the desired success in their career because there are some issues with their behaviors. Hence, the purpose of this study is to examine the impact of the big five personality factors on employees' career success. The dependent variable is career success, and the independent variable is the big five model. A questionnaire survey was conducted to gather data from staff-level employees, and 120 responses were obtained by selecting one leading apparel firm following the non-proportionate stratified random sampling technique. In this quantitative study, correlation and regression analysis were used to analyze data through SPSS Version 23.0. Based on the findings, conscientiousness and openness to experience were moderately correlated with subjective career success. Also, extraversion and agreeableness are positively associated with subjective career success. Thus, conscientiousness, openness to experience is positively related to objective career success. However, neuroticism is negatively correlated with objective career success, and extraversion was not supported to objective career success. Findings showed that there is a considerable impact of big five personality factors on career success. Hence, an organization should have a massive role to consider personality factors to improve the level of success in careers.

Keywords: *Big Five Personality Factors, Objective Career Success, Sri Lanka, Subjective Career Success*

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¹ Department of Human Resource Management, University of Kelaniya, Sri Lanka (dulanjikariyawasam@gmail.com)

² Department of Human Resource Management, University of Kelaniya, Sri Lanka

Introduction

The apparel industry is one of the largest industries in Sri Lanka, which has provided the highest volume in the export trade in Sri Lanka and the total value of exports in the apparel sector was 3,478.95 million USD in the year 2019 (Export Development Board, 2019). It represents more than 43.91% of the annual export income (Export Development Board, 2019). Apart from this, the industry supplies employment to a large number of employees and contributes highly to the Sri Lankan economy to solve the unemployment issues by providing a higher number of career opportunities. Further, the contribution of each employee has a huge impact on the success of any organization or industry.

A career is not simply a job but rather a lifelong effort comprising behaviors, attitudes, and feelings in a developmental process carried by people's work and life goals and moderated by the organizations they work in (Baruch, 2003). According to Judge, Cable, Boudreau, and Bretz (1994), career success can be defined as the real or perceived achievements individuals have accumulated as a result of their work experiences. The measure of career success can be viewed both objective (extrinsic) outcomes including salary achievement, several promotions, level of position, and subjective (intrinsic) outcomes are described as the subjective reactions of a person to his or her own profession and is most often operationalized as career or job satisfaction (Judge et al., 1999). In addition, organizations always attempt to retain talented employees in order to obtain a competitive advantage. Therefore, most of the human resource development strategies must be targeted to satisfy the employees and their career success, as well as to make them more efficient and effective (Adekola, 2011). Moreover, there is an interesting question: What factors lead some employees to become more successful in their careers than others? This is an adorable question to find out the factors which affect career success when the employees are at work. Boudreau, Boswell, and Judge (1999) revealed that understanding factors related to career success is essential in understanding the relationships between individual traits and behaviors, organizational practices, such as career planning and development, and societal and labor market processes that reflect what is ultimately valued in the labor market. Therefore, personality influences to gain the success of careers as well as for performance (Sulaiman, Ishak, & Shamuganathan, 2012).

According to Hussein (2017), there is a lack of knowledge about the relationship between personality traits on employee's career success. Similarly, Simonetti (1999) pointed out by conducting the open-ended questionnaire for more than 5,000 managers in Fortune 1,000 firms, 20 factors to review the key factors for career survival and success, which determine career success and personality was identified as the fourth important factor. Hence, Sulaiman, Ishak, and Shamuganathan (2012) pointed out that there is no proper and continuous improvement in a career to success; it is found for less successful among the same age group that they are left out of the rat race and feel frustrated, then it may give rise to many other subproblems such as early exit, looking for new jobs, or even deviant behavior. Therefore, some research studies implied that personality traits had been shown to influence performance and career directions (Mount, Barrick & Strauss, 1994; Furnham, 2002; Schneider & Hough, 1995, as cited in Sulaiman, Ishak, & Shamuganathan, 2012). However, based on the existing literature, the researchers identified that there is an empirical knowledge gap in the Sri Lankan context in this research area.

Also, in the apparel sector, employees play a major role to get maximum output from their day to day activities. There are high complexity and high work pressure in the workplace. The cause for this is, they are engaged in achieving the target productivity. As well as, employees are highly

interrelated with each other. Therefore, they need proper knowledge about personality engagement when they deal with each other to become successful in their careers. Further, this research has been implemented to find the proper combination of personality factors for career success. Also, Apparel sector has a huge challenge to maintain a quality workforce. Hence, personality drives individuals to hold certain positions both through attracting interesting jobs and by leading companies to choose certain individuals (Judge & Kammeyer-Mueller, 2007). Therefore, the researchers conducted a preliminary interview with the 20 staff-level employees in a leading apparel firm in Sri Lanka. According to that, the employees mentioned that they are facing serious issues in managing their career success with different personality behaviors when they perform their jobs and engage with people. Moreover, this causes different employee behaviors, which may impact the employees' career growth and success. By considering theoretical justifications, the researchers articulate the research problem as follows,

“What is the impact of big five personality factors on staff-level employees' career success in a leading apparel firm in Sri Lanka?”

The main objective of this study is to examine the impact of big five personality factors on staff-level employees' career success in a leading apparel firm in Sri Lanka. In addition to that, the specific objectives of this study are, (i) to identify the impact of big five personality factors on the Subjective Career Success of a staff-level employees' in a leading apparel firm in Sri Lanka, (ii) to identify the impact of big five personality factors on the Objective Career Success of a staff-level employees' in a leading apparel firm in Sri Lanka.

Literature Review

Career

A career as a complex lifelong process is made up of a regular order of activities and related attitudes or behaviors that take place in an employee's work-life (Greenhaus, Parasuraman, & Wormley, 1990). At the same time, organizations continue to have an interest in identifying the factors that predict career success in order to effectively select and develop high potential employees. In order to know the importance of careers for both individuals and organizations, there is a need to examine the factors that influence career success (Judge, Cable, Boudreau & Bretz, 1995; Hertz & Donovan, 2002 as cited in Sulaiman, Ishak, & Shamuganathan, 2012).

Career Success

Accordingly, Ng, Eby, Sorenson, and Feldman (2005) define career success as the accumulated positive work and psychological results arising from one's work experience (as cited in Sulaiman, Ishak, & Shamuganathan, 2012). Career success can also be judged by the individual pursuing a career (Judge, Cable, Boudreau, & Bretz, 1994). Further, career success was assumed to comprise objective (pay, ascendancy) and subjective (job satisfaction, career satisfaction) elements (Judge, Cable, Boudreau, & Bretz, 1994). Therefore, career success can be viewed both objectively (extrinsic) and subjectively (intrinsic). It is important to use both to measure career success because they measure different aspects of career success and can be influenced by different factors (Bray & Howard, 1980 as cited in L.B. De Grujter).

The objective path of a person's career, as described by a reference group, serves as the reference point for the external perspective (Gattiker & Larwood, 1989). Similarly, extrinsic career success can be measured in terms of salary and variety of promotions, which refers to outcomes that are both external rewards of the job or occupation and are objectively observable (Seibert & Kraimer, 1999). From a subjective perspective, it is important to determine how a person

perceives his or her level in an organizational hierarchy (Gattiker & Larwood, 1989). Similarly, the intrinsic achievements that individuals have accumulated there is a focus on subjectively reported outcomes like career satisfaction or job satisfaction (Greenhaus, Parasuraman, & Wormley, 1990).

The Big Five Model

The Big Five Model demonstrates that the human personality is comprised of five reasonably self-determining dimensions, which gives a significant and complete taxonomy for reviewing the individual's dissimilarities and provide the actual core in the human nature due to the dissimilarities (Awadh & Ismail, 2001). The five-factor model of personality is a hierarchical organization of personality traits in terms of five basic dimensions: neuroticism, extraversion, conscientiousness, openness to experience, and agreeableness (Costa & McCrae, 1995).

Extraversion is thought to consist of sociability (Judge et al., 1999). As well as extraverts are individuals highly motivated, energetic and assertive and these traits are typically highly regarded and rewarded, especially at higher levels and in a position of leadership (Hussein, 2017). According to Costa and McCrae (1995) that conscientiousness indicates an individual's degree of organization, persistence, hard work, and motivation, diligence and responsibility in the pursuit of goal accomplishment. According to Costa and McCrae (1995) that Openness to Experience is a personality dimension that characterizes employees are intellectually curious and tends to seek new experiences and explore novel ideas. Further, openness to experience has included several characteristics; such as philosophical and intellectual, imaginative, autonomous and nonconforming (Judge et al., 1999). Further, neuroticism includes individual differences in adjustment and emotional stability. A person with, high level of neuroticism tends to experience a number of negative emotions, including anxiety, hostility, annoyed, stressed, sulky, nervous, doubtful, unconfident depression, self-consciousness, impulsiveness, and accountability. Furthermore, workers who are low on neuroticism can be characterized as self-confident, calm, even-tempered, and relaxed (Costa & McCrae, 1995). Agreeableness represents one's interpersonal orientation. This characteristic associated with these characteristics includes being courteous, flexible, trusting, good-natured, forgiving, soft-hearted and tolerant (Barrick & Mount, 1991). Similarly, agreeableness in people includes two characteristics; such as cooperative and likable. Cooperative is described as trusting others and caring. On the other hand, likable is described with good-natured, cheerful, and gentle (Judge et al., 1999).

As an early study, Judge et al. (1999) mentioned that extraversion is positively related to objective career success. The result of extraversion was positively related to objective career success (Judge et al., 1999). Further, Judge and Kammeyer-Mueller (2007) mentioned that extraversion is correlated with slightly higher rates of extrinsic and intrinsic career success. According to Seibert and Kraimer (1999), extraversion was positively related to career satisfaction, salary, and promotions. Extraversion is having a moderately positive relationship with subjective career success (Zakaria & Yusof, 2018).

- **H1a** - There is a positive relationship between extraversion and staff level employees' objective career success.
- **H1b** - There is a positive relationship between extraversion and staff level employees' subjective career success.

According to Judge et al. (1999), conscientiousness is positively correlated with objective career success. As mentioned in the research of Judge and Kammeyer-Mueller, (2007), conscientiousness positively relates to objective career success. According to Judge et al. (1999),

conscientiousness is positively related to both objective and subjective career success. Further, Judge and Kammeyer-Mueller (2007) found that conscientiousness is positively correlated with intrinsic career success. According to Judge et al. (1999), there is a positive relationship between conscientiousness and subjective career success. There is a moderately positive relationship with subjective career success (Zakaria & Yusof, 2018). As mentioned in the research of Judge and Kammeyer-Mueller (2007), conscientiousness is positively related to subjective career success. According to the results, both conscientiousness are having a low positive relationship with subjective career success (Zakaria & Yusof, 2018).

- **H2a** - There is a positive relationship between conscientiousness and staff level employees' objective career success.
- **H2b** - There is a positive relationship between conscientiousness and staff level employees' subjective career success.

According to the result of Boudreau, Boswell, and Judge (1999), openness revealed the fewest significant total effects and the least consistent pattern of all the personality dimensions, including this openness to experience. Judge et al. (1999) mentioned that there is a positive relationship between openness to experience and subjective career success. Openness to experience is positively related to both objective and subjective career success (Hussein, 2017).

- **H3a** - There is a positive relationship between openness to experience and staff level employees' objective career success.
- **H3b** - There is a positive relationship between openness to experience and staff level employees' subjective career success.

According to Judge et al. (1999), neuroticism is negatively related to objective career success. A recent review of career success and big five personality literature identified that there is a negative relationship between neuroticism and objective career success (Zakaria and Yusof, 2018).

- **H4** - There is a negative relationship between neuroticism and staff level employees' objective career success.

The previous findings of research suggested that, fewer researches have investigated the relationship between agreeableness and career success (Judge et al., 1999). According to the results, agreeableness is having a low positive relationship with subjective career success (Zakaria & Yusof, 2018). Hussein (2017) found that agreeableness is also positively related to career success.

- **H5** - There is a positive relationship between agreeableness and staff level employees' subjective career success.

As mentioned in the above hypotheses based on the literature, these following hypotheses (H6 & H7) were developed to discover the impact of the big five personality factors on employees' career success through the conceptual framework.

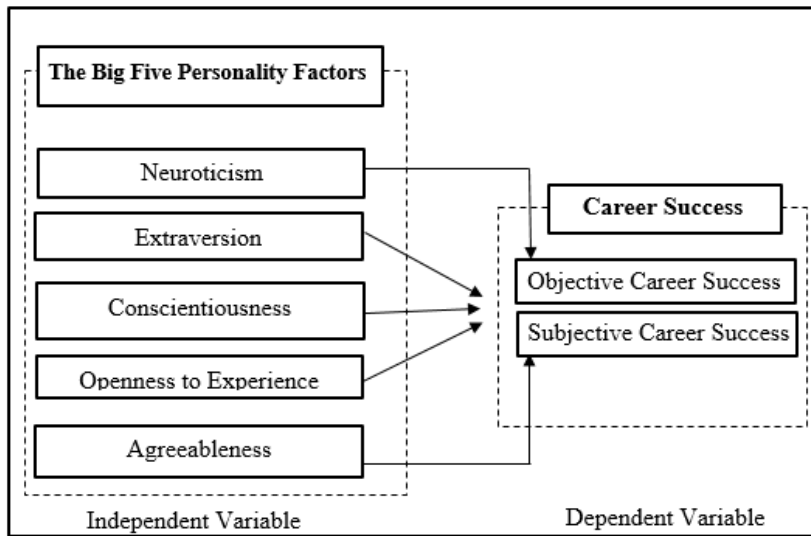
- **H6** - There is a significant impact of extraversion, conscientiousness, openness to experience, and neuroticism on staff-level employees' objective career success.
- **H7** - There is a significant impact of extraversion, conscientiousness, openness to experience, and agreeableness on staff-level employees' subjective career success.

Methods

Conceptual Framework

In the investigations of this current study, the researchers study the impact of big five personality factors on career success in a leading apparel firm in Sri Lanka. In this framework, career success worked as the dependent variable, which consists of two dimensions, and the big five personality factors worked as the independent variable, which consists of five dimensions of the study. Following, relationship and impact are assumed while other factors remain constant; the conceptual framework for the study is shown in Figure 1.

Figure 1: Conceptual Framework



(Source: Constructed by researchers based on literature)

This current study was a quantitative study that generated statistics through the use of large-scale survey research and cross-sectional data type research. Accordingly, from one leading apparel firm a population of 155 staff level employees were selected as the population for this study.

A non-proportionate stratified random sampling method was used to distribute the questionnaires among the selected sample of 120 staff-level employees. The data were collected through questionnaires, which consisted of 55 questions. The statement in the questionnaire was developed using five-point Likert scales. Further, subjective career success was taken from the career satisfaction scale developed by Greenhaus, Parasuraman, and Wormley (1990). The index of three factors (age \times job level \times income level) was used to measure objective career success, developed by Sulaiman, Ishak, and Shamuganathan, (2012). Personality type was measured through the BFI inventory using questions that were developed by Oliver P John in 1981 (John & Srivastava, 1981). It contains 44 items that separately describe five dimensions as neuroticism, extraversion, conscientiousness, openness to experience, and agreeableness. In order to measure hypotheses, correlation analysis, and the simple regression analysis were used in this particular study.

Results

For this study, researchers used to test the reliability of the variables of the study, 49 item scales were tested using Cronbach's alpha in the SPSS reliability test. According to the results of Table 1, the measures exceed the benchmark value of 0.7. Openness to experience is 0.683, which is closer to (0.7). Therefore, it can be concluded all variables fall under good reliability score ranges. It indicates the rule of Cronbach's Alpha of coefficient 0.7 to < 0.8 is good, and 0.8 to < 0.9 is very good.

Table 1: **Reliability Test**

Variable	Dimension	Cronbach's Alpha	No: of items
Career Success	Subjective Career Success	0.921	5
Big Five Personality Factors	Extraversion	0.740	8
	Conscientiousness	0.796	9
	Openness to experience	0.683	10
	Neuroticism	0.748	8
	Agreeableness	0.714	9

(Source: Data Analyzed Results, 2020)

According to the demographic information of gender, age, educational level, work experience, job, and monthly income level were analyzed in relation to the sample. According to the results, 69% of the respondents were represented by females, and 31% were represented by males. Most of staff-level employees represented the age group of 31-40, which are 51 employees. Among all the categories of educational levels, 70% have completed up to A/L. The majority (38%) of staff-level employees belong to the 2-6 years' service category. 30% of the majority of respondents represented the assistant category. 41% of the majority have maintained their income level between Rs. 41,000 to Rs. 60,000.

The mean value of the distribution of staff-level employees' subjective career success is 3.9548, according to five Likert scales. Then, the subjective career success of staff-level employees is "Moderate". The standard error of the mean is 0.06527, and it is greater than 0.05 with little deviation. The skewness and kurtosis of the distribution are 0.018 and -0.494, which indicated that the data recorded for the subjective career success are approximately normally distributed. Also, the mean value of the distribution of staff-level employees' extraversion is 3.7043, according to five Likert scales. Then the extraversion of staff-level employees is "Moderate". The standard error of the mean is 0.04807 with an acceptable deviation since it is less than 0.05. The skewness and kurtosis of the distribution are 0.016 and -0.630, which indicated that the data recorded for the extraversion are approximately normally distributed. Further, the mean value of the distribution of staff-level employees' conscientiousness is 4.1072, according to five Likert scales. Then, the conscientiousness of staff-level employees is "High". The standard error of the mean is 0.04099 with acceptable deviation since it is less than 0.05. The skewness and kurtosis of the distribution are 0.116 and -0.766, which indicated that the data recorded for the conscientiousness are normally distributed.

Furthermore, the mean value of the distribution of staff-level employees' openness to experience is 3.5226, according to five Likert scales. Then the openness to experience of staff-level employees is "Moderate". The standard error of the mean is 0.03791 with acceptable deviation since it is less than 0.05. The skewness and kurtosis of the distribution are 0.624 and -0.050, which indicated that the data recorded for the openness to experience are approximately normally distributed. Further, the mean value of the distribution of staff-level employees' neuroticism is 3.4978, according to five Likert scales. Then, the neuroticism of staff-level employees is "Moderate". The standard error of the mean is 0.03216 with an acceptable deviation since it is less than 0.05. The skewness and kurtosis of the distribution are -0.282 and -1.308, which indicated that the data recorded for the neuroticism are approximately normally distributed. Further, the mean value of the distribution of staff-level employees' agreeableness is 4.0725, according to five Likert scales. Then the agreeableness of staff-level employees is "High". The standard error of the mean is 0.03904 with an acceptable deviation since it is less than 0.05. The skewness and kurtosis of the distribution are 0.187 and -0.571, which indicated that the data recorded for the agreeableness are normally distributed.

According to Table 2, Pearson Correlation for the relationship between the big five personality factors and career success of the conceptual model is shown.

Table 2: Correlation Analysis

		N	Extraversion	Conscientiousness	Openness to Experience	Neuroticism	Agreeableness
Objective Career Success	Pearson Correlation	115	.073	.241**	.241**	-.276	-
	Sig. (1-tailed)		.220	.005	.005	.001	-
Subjective Career Success	Pearson Correlation	115	.371**	.464**	.428**	-	.259
	Sig. (1-tailed)		.000	.000	.000	-	.003

(Source: Data Analyzed Results, 2020)

This shows that there is a very weak positive relationship between extraversion and objective career success. The relationship which was found is not statistically significant as correlation is significant at 0.01 level (as Sig. value 0.220, which is greater than 0.01). However, there is a positive relationship between extraversion and subjective career success. The relationship which was found statistically significant as correlation is significant at 0.01 level (as Sig. value 0.000, which is lower than 0.01). Further, the Pearson Correlation Coefficient between conscientiousness and staff level employees' objective career success is 0.241 (one-tailed). This shows that there is a positive relationship between conscientiousness and objective career success. Further, there is a moderately positive relationship between conscientiousness and subjective career success. Further, the Pearson Correlation Coefficient between openness to experience and objective career success is 0.241 (one-tailed). This shows that there is a positive relationship between openness to experience and objective career success. Also, this shows that

there is a moderately positive relationship between openness to experience and subjective career success. However, there is a negative relationship between neuroticism and objective career success. Further, the Pearson Correlation Coefficient between agreeableness and subjective career success is 0.259 (one-tailed). There is a positive relationship between agreeableness and subjective career success and Table 3 summarizes the impact of big five personality factors on career success.

Table 3: Results of Regression Analysis

Hypotheses	Results
H6: There is a significant impact of neuroticism, extraversion, conscientiousness, and openness to experience on staff level employee's objective career success. ($r=0.394$, $r^2=0.155$, $P=0.001$)	Accepted
H7: There is a significant impact of extraversion, conscientiousness, openness to experience, and agreeableness on staff level employee's subjective career success. ($r=.513$, $r^2=0.263$, $P=0.000$)	Accepted

(Source: Data Analyzed Results, 2020)

According to the results of regression analysis, R Square is 0.155, and as a percentage, it is 15.5%. The R-value is 39.4%. The meaning of 15.5% of the variation in objective career success is explained by the extraversion, conscientiousness, openness to experience, and neuroticism. Further, Field (2009) suggests that the ANOVA test implies whether the model is significantly better at predicting the outcomes according to the P-value (see Table 3, H6). Therefore, the P-value (see Table 3, H6) is less than 0.05 level ($p=0.001<0.05$), and it can be concluded that the relationships are statistically significant. According to Table 3 (H7), R Square is 0.263, and as a percentage, it is 26.3%. The R-value is 51.3%. The meaning of 26.3% of the variation in subjective career success is explained by the extraversion, conscientiousness, openness to experience, and agreeableness. Further, the P-value (see Table 3, H7) is less than 0.05 level ($p=0.000<0.05$), and it can be concluded that the relationships are statistically significant. Further, researchers can accept the hypotheses.

Conclusion

Being a good employee is essential in today's world. People and their behaviors are a more vital part of the success or failure of any organization. Accordingly, this study is a new insight into addressing a problem regarding the Sri Lankan context. Thereby, the primary focus of this study was to discover the impact of big five personality factors on employees' career success in a leading apparel firm in Sri Lanka. According to the correlation results, all the seven hypotheses were accepted except the objective part of the extraversion hypothesis. Conscientiousness, openness to experience is positively related to objective career success. However, neuroticism is negatively correlated with objective career success. Further, there is a very weak positive relationship, and it is not significant between extraversion and objective career success. Thus, extraversion and agreeableness are positively associated with subjective career success. Also, conscientiousness and openness to experience are having a moderately positive relationship with subjective career success. Further, the conscientiousness personality factor has found a higher level of favorable experience in the majority of the staff level employees when compared with the other four personality factors. Moreover, researchers could address the main problem of this

study: there is an impact of big five personality factors on staff-level employees' career success in a leading apparel firm in Sri Lanka. Thus, it identified the big five personality factors as a vital factor to impact employees' career success when referring to the literature.

Also, this research revealed, this leading apparel firm needs to implement an effective career development plan for employees by conducting personality development assessments tests to be more productive. Moreover, most of the employees think that just their performance is needed to achieve success in their careers. Here, this study investigated to find out the proper implication of the big five personality factors on career success. If employees are successful in their careers, then it is more successful in the job. Hence, organizations can choose the right personality factors for individuals. Also, it provides the background which is necessary to get the right employees to the right job. Therefore, this study area gives implication to knowledge and practice about experiences for the proper knowledge about personality factors and the impact of it on career success as well as for others. The limitation of this study included the inability to analyze behavior over a period of time and the use of a single primary data collection method. Further, researchers suggest exploring this problem to address a large population that includes the apparel industry. For future investigators, the researchers encourage investigating this research area into the rationale behind to attain career success across different contexts.

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Impact of Workplace Spirituality on Organizational Citizenship Behavior: A Comparative Study of Public and Private Sector Banking Employees in Sri Lanka

Bartholomeusz, R. A.¹ and Edirisooriya, W. A.²

Banks prefer to have individuals who possess extraordinary talents who are not only hard workers but also who can go beyond the minimum expectations of the company by demonstrating Organizational Citizenship Behaviors (OCB). However, the employer cannot force the employee to exhibit OCB and at the same time employee cannot expect formal rewards for performing OCB. With this challenge, the ways in which to stimulate OCB within and among banking employees is a problem. The empirical studies carried out by various scholars around the world have proved that workplace spirituality is a significant contributor for OCB. However, there are no evidences from the Sri Lankan context. Therefore, the purpose of the study is to assess the effect of workplace spirituality (meaningful work, sense of community and alignment with organizational values) on OCB with respect to private and public sector banking employees in Sri Lanka. Researcher followed the non-probabilistic convenience sampling method due to the absence of the sampling frame. With a standard questionnaire, responses were obtained from 282 banking employees. Results of regression analysis showed that workplace spirituality significantly impacts on OCB with respect to both public and private sector banking employees. But statistically, this impact is higher among private sector banking employees in Sri Lanka. In reality, with work pressure and industry standards, demonstrating OCB is a huge challenge for both public and private sector banking employees. But yet, OCB of banking employees can be inspired intrinsically by creating a spirituality driven workplace.

Keywords: *Banking Sector Employees, Organizational Citizenship Behavior, Workplace Spirituality*

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¹ Department of Human Resource Management, Faculty of Management, University of Peradeniya, Sri Lanka (rochellebartholomeusz@gmail.com)

² Department of Human Resource Management, Faculty of Management, University of Peradeniya, Sri Lanka

Introduction

In the Sri Lankan banking industry, attracting and retaining top talent is a massive challenge but yet, it is an essential resource to compete not only with the traditional sector rivals but also against the technology driven start-ups. During the process of hiring, employers expect certain voluntary behaviors and conducts which were not mentioned in the job advertisement. Simply, employers investigate whether the particular candidate has the willingness and the ability to go beyond the implied and expressed expectations of the company. On the other hand, employee should also understand that there are instances where they need to accept tasks, duties and responsibilities voluntarily beyond the given job description while performing the job for which he/she was hired for. In the corporate world, this voluntary behavior is known as "Organizational Citizenship Behavior" (Thiagarajan, Yabesh, & Durairaj, 2017).

OCB plays a crucial role in achieving and sustaining competitive advantage (Sharma, 2015). The favorable outcomes of OCB such as increase in customer satisfaction, productivity, efficiency and reduction in costs help to enrich the service capabilities of the bank. Most importantly, the strategies which are used to sustain the competitive advantage must also be adapted to sustain OCB among the employees of the organization (Sharma, 2015). But, more frequently employees feel pressured to be good organizational citizens (Mark & Anthony, 2017). Therefore, employers need to create a better atmosphere for employees to go beyond the call of duty.

Unlike before, employees are eager to bring their core spiritual philosophies and beliefs and therefore, employers are enthusiastic in applying spirituality driven concepts and principles at workplace. Hence, Robbins and Judge (2009) highlighted that having a proper awareness about workplace spirituality is vital because it helps employers to understand the employee behavior in the twenty first century. Simply, workplace spirituality can be utilized to understand what type of behavior the employee demonstrates at work (Genty, Fapohunda, Jayeoba, & Azeez, 2017).

Research Problem

Though, researchers have extensively studied about OCB, the degree to which OCB can be inspired through workplace spirituality is yet to be determined (Nasurdin, Nejati, & Mei, 2013). On the other hand, the prevailing studies have discovered contradictory results. For instance, Charoensukmongkol, Daniel, & Jardon, (2015) concluded that, workplace spirituality positively impacts on OCB but, Kazemipour & Mohd Amin, (2012) identified that workplace spirituality does not have any significant impact on OCB. Further, there are no evidences from the Sri Lankan context up to date connecting workplace spirituality and OCB together with especial reference to the banking industry. To fulfill the above mentioned theoretical and contextual deficiencies doing more research on workplace spirituality and OCB together is indispensable (Ghorbanifar & Azma, 2014).

Research Question

Does workplace spirituality (including the three dimensions of workplace spirituality; meaningful work, sense of community and alignment with organizational values) significantly impact OCB of public and private sector banking employees in Sri Lanka?

Research Objective

To investigate whether workplace spirituality (including the three dimensions of workplace spirituality; meaningful work, sense of community and alignment with organizational values) significantly impact OCB of public and private sector banking employees in Sri Lanka

Significance of the Study

The outcomes of the study offered an extra contribution to the prevailing literature as workplace spirituality and OCB are evolving concepts that require more empirical support (Ahmad & Omar, 2015). Further, industry experts can use OCB as a low cost strategy to enhance the overall effectiveness of the organization (Nemeth & Staw, 1989). Hence from this study, public and private sector banks can gain knowledge about what OCB is and how it can be enhanced and strengthened through workplace spirituality. Further, managers will get the opportunity to treat the concept of workplace spirituality in a serious manner in the modern era and accordingly they can redesign the work environment with spirituality driven principles in order to inspire employees to exhibit more OCBs.

Literature Review

Organizational Citizenship Behavior (OCB)

OCB is one of the most deeply researched variables in the organizational behavior literature (Gyekye & Haybatollahi, 2015). Organ (1988), mentioned OCB as an individual behavior that is discretionary but yet, it is an essential behavior which is required for the betterment of the organization. Since, OCB is a voluntary act which is beyond the employee's official duties it cannot be honored or compensated through a formal reward system of the organization (Shasavary, Parsanasab, & Morady, 2016). Further, Turnipseed and Rassuli (2005) highlighted some of the examples related to OCB such as corporation with peers, volunteering and helping others, accepting and performing extra duties without complaint, punctuality, utilization of resources efficiently and effectively, exchange ideas and positively representing the organization are some of them. According to Organ (1988), OCBs exist in various forms such as altruism (helping other employees of the organization in their work, helping the new employees get used to work, sharing the workload and helping co-workers to settle problems, helping others to meet deadlines), civic virtue (attending meetings which are not mandatory and aligning with the changes in the organization), conscientiousness (commitment to the organization such as working long hours, accepting additional tasks in the organization), courtesy (being polite with those who the individual works with) and sportsmanship (warmly bearing the frustrations and surviving uncomfortable working conditions without making complaints).

Workplace Spirituality

According to Ashmos and Duchon (2000) workplace spirituality is not about converting people to a specific belief system or religion but, acknowledging that people have both an inner life and an outer life, and inspiration of inner life leads to a fruitful outer life. Further, Ghorbanifar and Azma (2014) emphasized that rather than relying on financial rewards, employees can be inspired to change their work related behaviors through workplace spirituality by understanding their inner desire for living and working. Milliman, Czaplewski, and Ferguson (2003) identified three levels in workplace spirituality. 'Individual level' associated with meaningful work dimensions, 'group level' associated with the sense of community dimension and 'organizational level' associated with the alignment to organizational values dimension.

Workplace Spirituality and OCB

Initially, the researcher wanted to test the overall impact of workplace spirituality on OCB. Subsequently the three dimensions of workplace spirituality: meaningful work, sense of community and alignment with organizational values were used separately to test its' impact on OCB. However, except in Sri Lanka, similar studies have been conducted in multiple

countries around the world. For instance, Nasurdin, Nejati, and Mei (2013) assessed the impact of workplace spirituality on OCB with respect to academic staff members of private institutions in Malaysia. The study proved that when employees own a deep sense of purpose in their work, feel connected to others and experience a strong sense of congruence between their personal values and organizational values, they tend to exhibit more OCBs in their workplace. As a result, employees become more satisfied, act in a more collaborative manner, and apply their full potential to work and to their respective organizations. Similarly, Ghorbanifar and Azma (2014) examined the relationship between workplace spirituality and OCB and the study confirmed that there is a favorable positive association between workplace spirituality (including meaningful work, sense of community and alignment with organizational values) and OCB with respect to banks in Sari. Further, Ghorbanifar and Azma (2014) recommended that spirituality at workplace must be strengthened in a way that employees get inspired to demonstrate OCBs voluntarily. This stimulates employees to work with pleasure and even to do more favorable things that exceed formal obligations (Kazemipour & Mohd Amin, 2012). Simply, OCB can be enhanced through the benefits of workplace spirituality (Jannah & Santos, 2017). Therefore, it is hypothesized that:

H₁: Workplace spirituality has a significant impact on organizational citizenship behavior.

Meaningful Work and OCB

According to Milliman et al. (2003) the most essential criteria of work place spirituality is having a 'sense of purpose' in work. Simply, meaningfulness denotes the value that an individual assigns to his or her work goal (May, Gilson, & Harter, 2004). When employees recognized that their job is meaningful they are more likely to commit themselves to their job as well as to their organization (Charoensukmongkol, Daniel, & Jardon, 2015). In other words, when employees realize that their job is meaningful it enables them to connect with their work environment and to contribute more as they tend to develop an emotional bond with the organization (Dyne, Cummings, & McLean, 1995). Therefore, it is hypothesized that:

H_{1a}: Meaningful work has a significant impact on organizational citizenship behavior.

Sense of Community and OCB

'Sense of community' is about occupying a place where employees can feel there is a strong relationship among the coworkers (Ashmos & Duchon, 2000) and employees with higher sense of community are more likely to show the willingness to help, protect and work for the betterment of others (Schwartz & Bilsky, 1990). Ashmos & Duchon, (2000) realized that a sense of community can be experienced only when employees get the opportunity to work in a place where they can feel a strong bond among the coworkers. Such employees are more likely to help, protect and promote the welfare of others (Schwartz & Bilsky, 1990). This can encourage employees to make unrestricted contributions to support their coworkers and the organization beyond the assigned responsibilities. Therefore, it is hypothesized that:

H_{1b}: Sense of community has a significant impact on organizational citizenship behavior.

Alignment with Organizational Values and OCB

The strong alignment between personal values of employees with the mission and values of the organization is crucial (Ghorbanifar & Azma, 2014). Schneider (1987) discovered that, individuals are attracted to organizations that they perceive to have values similar to their own. Simply, it is a blessing to be able to occupy a place where the employer and employee share common interests, values and beliefs (Ashmos & Duchon, 2000). Most importantly, Nikpour, Manzari, and Hosseinnazad (2010) found that the alignment with organizational values has a

positive impact on OCB with respect to employees in the Kerman Martyr Foundation. Therefore, it is hypothesized that:

H_{1c}: Alignment with organizational values has a significant impact on organizational citizenship behavior.

Methods

The study was based on the positivism philosophy and the deductive approach. Through convenience sampling, 400 questionnaires were distributed to banking employees in Sri Lanka. However, 300 filled questionnaires were received but, only 282 were usable for data analysis. Researcher utilized the convenience sampling method not just because it was easy to collect data but because the population was too large and due to the non-availability of the sampling frame during the period of the study. In order to execute the survey strategy, the researcher prepared a standard questionnaire with a five point Likert scale using 24 items of the OCB scale (including the dimensions of altruism, civic virtue, conscientiousness, courtesy and sportsmanship) developed by Podsakoff, Ahearne, and MacKenzie (1997) and 21 items of spirituality at work scale (including meaningful work, sense of community and alignment with organizational values dimensions) of Milliman, Czaplewski, and Ferguson (2003). Initially a pilot study was conducted with 30 participants in order to check the reliability of the instruments. The Cronbach's α value for OCB and workplace spirituality was 0.779 and 0.866 respectively. Overall hypotheses testing was done using the simple regression analysis with the support of the SPSS version 19.

Findings of the Study

Respondents Profile

Table 1: Respondents Profile

Demographic Factors		Public Sector Banks		Private Sector Banks	
		Frequency	%	Frequency	%
Gender	Male	48	36.1	71	47.7
	Female	85	63.9	78	52.3
Age	20-29years	55	41.4	91	61.1
	30-39years	51	38.3	38	25.5
	40-49years	16	12.0	16	10.7
	50 years and above	11	8.3	04	2.7
Position	Branch Manager	24	18.0	15	10.1
	Assistant Manager	17	12.8	13	8.7
	Officer	04	3.0	16	10.7
	Senior Banking Executive	12	9.0	08	5.4
	Junior Banking Executive	06	4.5	32	21.5
	Banking Assistant	65	48.9	63	42.3
	Management Trainee	05	3.8	02	1.3

Nature of the Bank	Public Banks	133	47.2	-	-
	Private Banks	-	-	149	52.8

Note: Survey Data, 2020

In this study, majority of the participants were female banking employees and as a percentage it was 63.9% in the public sector and in the private sector it was 52.3%. Based on the age category in both public (41.4%) and private sector (61.1%), majority of the respondents were in between 20-29 years during the period of study. Moreover, with respect to job position, majority of the respondents were banking assistants in both public (48.9%) and private sector (42.3%). A large section of the sample represented the private sector banking employees and as a percentage it was 52.8%.

Hypotheses Testing

H₁: Workplace spirituality has a significant impact on organizational citizenship behavior

Table 2: Model Summary

Public Sector Banks	R	.422
	R Square	.178
	Adjusted R Square	.172
	Std. Error of the Estimate	.31331
Private Sector Banks	R	.541
	R Square	.293
	Adjusted R Square	.288
	Std. Error of the Estimate	.36262

Note: Survey Data, 2020

Table 3: ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
Public Sector Banks	Regression	2.781	1	2.781	28.332	.000
	Residual	12.859	131	.098		
	Total	15.640	132			
Private Sector Banks	Regression	8.004	1	8.004	60.868	.000
	Residual	19.330	147	.131		
	Total	27.333	148			

Note: Survey Data, 2020

Table 4: Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
Public Sector Banks	(Constant)	2.350	.283		8.308	.000
	WPS	.374	.070	.422	5.323	.000

Private	(Constant)	2.028	.276		7.346	.000
Sector	WPS	.558	.072	.541	7.802	.000
Banks						

Note: Survey Data, 2020

Public Sector Banks: The correlation coefficient value (R) of workplace spirituality was 0.422 which means there was a moderate positive correlation between workplace spirituality and OCB. Based on the R square value (0.178), workplace spirituality can account only for 17.8 % of variance in OCB. According to the ANOVA table, the Sig value was 0.000 (less than 0.05) and F value was 28.332 and it showed the goodness of fit. This indicated that workplace spirituality can significantly predict OCB. Further, the linear regression equation was derived using the coefficient table and it was statistically significant ($OCB = 2.350 + 0.374 * WPS$). This means that increase in one unit of workplace spirituality results in an increase of 0.374 units of OCB.

Private Sector Banks: The correlation coefficient value (R) of workplace spirituality was 0.541 which means there was a moderate positive correlation between workplace spirituality and OCB. Based on the R square value (0.293), workplace spirituality can account only for 29.3 % of variance in OCB. According to the ANOVA table, the Sig value was 0.000 (less than 0.05) and F value was 60.868 and it showed the goodness of fit. This indicated that workplace spirituality can significantly predict OCB. Further, the linear regression equation was derived using the coefficient table and it was statistically significant ($OCB = 2.028 + 0.558 * WPS$). This means that increase in one unit of workplace spirituality results in an increase of 0.558 units of OCB.

With the above findings, the researcher accepted the alternative hypothesis of H_1 where; “workplace spirituality has a significant impact on organizational citizenship behavior”. Statistically, this positive impact of workplace spirituality on OCB was slightly higher among the private sector banking employees compared to the public sector banking employees in Sri Lanka.

H_{1a}: Meaningful work has a significant impact on organizational citizenship behavior

Table 5: Model Summary

Public Sector Banks	R	.409
	R Square	.167
	Adjusted R Square	.161
	Std. Error of the Estimate	.31537
Private Sector Banks	R	.474
	R Square	.225
	Adjusted R Square	.220
	Std. Error of the Estimate	.37960

Note: Survey Data, 2020

Table 6: ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig
Public Sector Banks	Regression	2.611	1	2.611	26.252	.000
	Residual	13.029	131	.099		
	Total	15.640	132			

Private Sector Banks	Regression	6.152	1	6.152	42.691	.000
	Residual	21.182	147	.144		
	Total	27.333	148			

Note: Survey Data, 2020

Table 7: Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
Public Sector Banks	(Constant)	2.597	.246		10.571	.000
	MW	.309	.060	.409	5.124	.000
Private Sector Banks	(Constant)	2.581	.245		10.525	.000
	MW	.416	.064	.474	6.534	.000

Note: Survey Data, 2020

Public Sector Banks: The correlation coefficient value (R) of meaningful work was 0.409 which means there was a moderate positive correlation between meaningful work and OCB. Based on the R square value (0.167), meaningful work can account only for 16.7% of variance in OCB. Based on the ANOVA table the Sig value was 0.000 (less than 0.05) and F value was 26.252 and it showed the goodness of fit. This indicated that meaningful work can significantly predict OCB. Further, the linear regression equation was derived using the coefficient table and it was statistically significant ($OCB = 2.597 + 0.309 * MW$). This means that increase in one unit of meaningful work results in an increase of 0.309 units of OCB.

Private Sector Banks: The correlation coefficient value (R) of meaningful work was 0.474 which means there was a moderate positive correlation between meaningful work and OCB. Based on the R square value (0.225), meaningful work can account only for 22.5% of variance in OCB. Based on the ANOVA table, the Sig value was 0.000 (less than 0.05) and F value was 42.691 and it showed the goodness of fit. This indicated that meaningful work can significantly predict OCB. Further, the linear regression equation was derived using the coefficient table and it was statistically significant ($OCB = 2.581 + 0.416 * MW$). This means that increase in one unit of meaningful work results in an increase of 0.416 units of OCB.

With the above findings, researcher accepted the alternative hypothesis of H_{1a} where; “meaningful work has a significant impact on organizational citizenship behavior”. Statistically, this positive impact of meaningful work on OCB was slightly higher among the private sector banking employees compared to the public sector banking employees in Sri Lanka.

H_{1b}: Sense of community has a significant impact on organizational citizenship behavior

Table 8: Model Summary

Public Sector Banks	R	.229
	R Square	.053
	Adjusted R Square	.045
	Std. Error of the Estimate	.33632
Private Sector Banks	R	.464
	R Square	.216
	Adjusted R Square	.210
	Std. Error of the Estimate	.38191

Note: Survey Data, 2020

Table 9: ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
Public Sector Banks	Regression	.822	1	.822	7.271	.008
	Residual	14.818	131	.113		
	Total	15.640	132			
Private Sector Banks	Regression	5.893	1	5.893	40.404	.000
	Residual	21.440	147	.146		
	Total	27.333	148			

Note: Survey Data, 2020

Table 10: Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
Public Sector Banks	(Constant)	3.183	.248		12.809	.000
	SC	.168	.062	.229	2.696	.008
Private Sector Banks	(Constant)	2.476	.268		9.227	.000
	SC	.439	.069	.464	6.356	.000

Note: Survey Data, 2020

Public Sector Banks: The correlation coefficient value (R) of sense of community was 0.229. This confirmed that there was a weakly positive correlation between sense of community and OCB. Based on the R square value (0.053) sense of community can account only for 5.3 % of variance in organizational citizenship behavior. Based on the ANOVA table, the Sig value was 0.008 (less than 0.05) and F value was 7.271 and it showed the goodness of fit. This indicated that sense of community can significantly predict OCB. Further, the linear regression equation was derived using the coefficient table and it was statistically significant ($OCB = 3.183 + 0.168 * SC$). This means that increase in one unit of sense of community results in an increase of 0.168 units of OCB.

Private Sector Banks: The correlation coefficient value (R) of sense of community was 0.464. This confirmed that there was a moderately positive correlation between sense of community and OCB. Based on the R square value (0.216) sense of community can account only for 21.6 % of variance in OCB. Based on the ANOVA table, the Sig value was 0.000 (less than 0.05) and F value was 40.404 and it showed the goodness of fit. This indicated that sense of community can significantly predict OCB. Further, the linear regression equation was derived using the coefficient table and it was statistically significant ($OCB = 2.476 + 0.439 * SC$). This means that increase in one unit of sense of community results in an increase of 0.439 units of OCB.

With the above findings, the researcher accepted the alternative hypothesis of H_{1b} where; “sense of community has a significant impact on organizational citizenship behavior”. Statistically, the positive impact of sense of community on OCB was slightly higher among the private sector banking employees compared to the public sector banking employees in Sri Lanka.

H_{1c}: Alignment with organizational values has a significant impact on organizational citizenship behavior

Table 11: Model Summary

Public Sector Banks	R	.397
	R Square	.157
	Adjusted R Square	.151
	Std. Error of the Estimate	.31719
Private Sector Banks	R	.500
	R Square	.250
	Adjusted R Square	.245
	Std. Error of the Estimate	.37337

Note: Survey Data, 2020

Table 12: ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
Public Sector Banks	Regression	2.461	1	2.461	24.460	.000
	Residual	13.180	131	.101		
	Total	15.640	132			
Private Sector Banks	Regression	6.841	1	6.841	49.069	.000
	Residual	20.493	147	.139		
	Total	27.333	148			

Note: Survey Data, 2020

Table 13: Results of Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
	Std. Error			

Public Sector Banks	(Constant)	2.747	.224		12.251	.000
	OV	.275	.056	.397	4.946	.000
Private Sector Banks	(Constant)	2.400	.255		9.428	.000
	OV	.463	.066	.500	7.005	.000

Note: Survey Data, 2020

Public Sector Banks: The correlation coefficient value (R) of alignment with organizational values was 0.397. This confirmed that there is a moderately positive correlation between alignment with organizational values and OCB. Based on the R square value (0.157) alignment with organizational values can account only for 15.7 % of variance in OCB. Based on the ANOVA table, the Sig value was 0.000 (less than 0.05) and F value was 24.460 and it showed the goodness of fit. This indicated that alignment with organizational values can significantly predict OCB. Further, the linear regression equation was derived using the coefficient table and it was statistically significant ($OCB = 2.747 + 0.275 * OV$). This means that increase in one unit of alignment with organizational values results in an increase of 0.275 units of OCB.

Private Sector Banks: The correlation coefficient value (R) of alignment with organizational values was 0.500. This confirmed that there was a moderately positive correlation between alignment with organizational values and OCB. Based on the R square value (0.250) alignment with organizational values can account only for 25 % of variance in OCB. Based on the ANOVA table, the Sig value was 0.000 (less than 0.05) and F value was 49.069 and it showed the goodness of fit. This indicated that alignment with organizational values can significantly predict OCB. Further, the linear regression equation was derived using the coefficient table and it was statistically significant ($OCB = 2.400 + 0.463 * OV$). This means that increase in one unit of alignment with organizational values results in an increase of 0.463 units of OCB.

With the above findings, researcher accepted the alternative hypothesis of H_{1c} where; “alignment with organizational values has a significant impact on organizational citizenship behavior”. Statistically, this positive impact of alignment with organizational values on OCB was slightly higher among the private sector banking employees compared to the public sector banking employees in Sri Lanka.

Conclusion

The present study investigated the impact of workplace spirituality (including meaningful work, sense of community and alignment with organizational values) on OCB of public and private sector banking employees in Sri Lanka. Based on the results obtained from simple regression analysis, the researcher concluded that,

‘Workplace spirituality’ significantly impact OCB. But statistically, this impact was higher among the private sector banking employees compared to the public sector banking employees in Sri Lanka.

‘Meaningful work’ significantly impact OCB. But statistically, this impact was higher among the private sector banking employees compared to the public sector banking employees in Sri Lanka.

‘Sense of community’ significantly impacts OCB. But statistically, this impact was higher among the private sector banking employees compared to the public sector banking employees in Sri Lanka.

‘Alignment with organizational values’ significantly impact OCB. But statistically, this impact was higher among the private sector banking employees compared to the public sector banking employees in Sri Lanka.

Though, Kazemipour & MohdAmin (2012) identified workplace spirituality as not having any significant impact on OCB, this study proved that workplace spirituality has a significant impact on OCB. Both public and private sector banking employees who experience spirituality at workplace followed by meaningful work, sense of community and alignment with organizational values tend to exhibit more OCBs in their respective organizations. Such employees are willing to go an extra mile by accepting tasks, duties and responsibilities beyond the formal job description. The findings of this present study was in line with the findings of the previous studies conducted by Shasavary, Parsanasab, and Morady (2016), Kazemipour and MohdAmin (2012), Ahmadi, Nami, and Barvarz (2014), Pawer (2009), Nasurdin et al. (2013), Charoensukmongkol, Daniel, and Jardon (2015), Ghorbanifar and Azma (2014), Hachesou and Balouch (2018) and Nikpour et al. (2010).

Employees in the banking industry need full time attention to ensure accuracy of the job and on the other hand obliged to maintain exceptional work standards. At the same time, expecting more OCBs from banking employees can result in more tension and pressure. So, going above and beyond the given job description voluntarily, would be a huge challenge for bankers. Therefore, both public and private sector banks need to build a favorable workplace followed by spirituality principles and concepts in order to inspire banking employees intrinsically to go beyond the call of duty. In conclusion, workplace spirituality can be used as a fundamental strategy to inspire OCB of employees. In other words, organizations that promote spirituality at workplace can expect more OCBs from their employees.

Implications

With the findings, the researcher highly recommends integrating spirituality driven concepts and principles to the corporate culture and to the mission statement of the company. However, it should replicate from the policies, procedures and practices of the company on daily basis and all levels of employees need to ensure that their decisions are in line with spiritual values such as kindness, integrity and respect.

If employees perceive that their work environment is unfavorable, they feel meaningless. This will discourage employees from doing their best and sometimes employees may even change their values and will give more priority for salary and other financial incentives than non-monetary rewards. Therefore, it is the branch manager’s responsibility to highlight and educate employees on how every job activity; decision and behavior add values to the organization. In other words, it is much more effective when the manager can explain why a task is important rather than just telling employees what to do. By doing so, employees feel pride and view themselves as worthy organizational members and as a result they tend to engage in more voluntary behaviors beyond their formal job description.

Further, OCB can be enhanced through effective inter employee relationships. Employees are willing to develop a better rapport with one another and they really do care about others and are less likely to feel isolated. Sense of community can be established with small groups of dedicated and compassionate employees in the bank. Such community ship groups can act as role models and promote OCBs throughout the branch.

Values play a significant role in determining why employees should behave as citizens in organizations. Unlike before, today employers are trying to align their employees with the values of the company but, it is not realistic. If, individual values are not properly aligned with organizational values; employees would operate by objectives and obligations rather than by preference. Therefore, the management should accept their employees for who they are, what they can become rather than what they can do for the bank. Hence, banks should help employees to bring their own values, passion, heart and soul to the workplace.

Further, this study proposed that workplace spirituality can be used as another work condition and a cost effective strategy to stimulate OCBs of employees to go beyond the call of duty by accepting additional tasks, duties and responsibilities voluntarily without a burden.

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Factors Affecting the Job Dissatisfaction of Junior Female Academics at University of Sri Jayewardenepura, Sri Lanka: With Special Reference to the Faculty of Management Studies and Commerce and the Faculty of Humanities and Social Sciences

Sellaheewa, W. N.¹

‘Education’ is an extremely important component in the life of all human beings. At present, the major role of distributing education is been played by educational institutions. Universities can be regarded as the apex of the educational ladder. This study has been conducted with reference to the junior female academics. Here the term ‘junior female academics’ refers to the female academics under the probationary category. The purpose of narrowing down the theme in the above manner is due to the research gap that has been identified by the researcher after going through the literature review. The main purpose of conducting this study is to identify the factors affecting the job dissatisfaction of junior female academics at universities and provide recommendations to increase their job satisfaction. The population of this study is limited to all the junior female academics of the University of Sri Jayewardenepura. The size of the sample is 20 and the sample has been selected purposively. Primary data was collected by the use of in-depth interviews. Gathered data has been analyzed qualitatively. The study has revealed that no junior female academic is fully satisfied with their job or fully dissatisfied with their job. According to this study, the factors affecting the job dissatisfaction were related to working environment, work relations, advancement, empowerment, recognition, and work load. As per the second objective of the study, to overcome those dissatisfactory factors, this study has suggested the recommendations such as fair treatments, rewarding hard work, good induction process, promote autonomy, assigning meaningful jobs and providing the required facilities.

Keywords: Education, Job Dissatisfaction, Junior Female Academics

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¹ University of Sri Jayewardenepura, Sri Lanka (wasanansellaheewa@gmail.com)

Introduction

According to the literature review, the researcher has identified that job satisfaction to be a very common theme for researches. A number of researches have been conducted related to job satisfaction in different countries.

Here, the researcher was interested in conducting this study with reference to female academics at universities. Accordingly, in this study, the researcher is interested in the job satisfaction of junior female academics.

As most of the problems related to job satisfaction are common for both males and females, the researcher was interested in finding out the problems related to the job dissatisfaction of the female academics.

According to the preliminary study, it was found that many of the problems are common for both junior and senior female academics. However, this research will be focused on junior female academics (permanent) and their job dissatisfaction.

Here the researcher identified the importance of junior female academics to the university. Junior academics are very important to any academic institution because they are the ones who should be well trained to perform better in the future. Being proactive will ensure the progress of the institution.

By conducting this research, it will enable the identification of the factors affecting job dissatisfaction of the junior female academics and it will be beneficial for increasing the career satisfaction of junior female academics. Satisfied junior staff will contribute more to the university. Then it is expected that, with the recommendations that have been provided based on the findings of this study, would be more beneficial for improving their performance and productivity of junior academics of selected faculties at University of Sri Jayewardenepura.

Having identified the problems faced by junior female academics, it is expected to provide recommendations based on the findings of this study. It would be beneficial for improving the satisfaction, performance and productivity of junior female academics of selected faculties at University of Sri Jayewardenepura. Satisfied junior staff will contribute more to the university.

Research Questions

- What are the factors affecting the job dissatisfaction of junior female academics at USJP?

Objectives of the research

- To identify the factors affecting job dissatisfaction of junior female academics at USJP
- Provide recommendations to overcome the factors affecting the job dissatisfaction of junior female academics at USJP

Literature review

The definition of job dissatisfaction

Job dissatisfaction refers to unhappy or negative feelings about work or the work environment. There exist many factors which may result in job dissatisfaction. Some of them are poor working conditions, overwork, low levels of pay, no scope of promotion or career advancement and lack of recognition. Job dissatisfaction can only arise from the experience

of bad surprises with the current job, good surprises with current opportunities, or unexpected binding constraints like becoming involuntarily laid off and unemployed.

Determinants of job satisfaction based on empirical researches

Luthens (2005) suggests that pay, promotion, work, supervision and fellow workers are the main determinants of job satisfaction.

Oshagbemi (2003) also conducted a research among UK academics and has found a statistically significant relationship among pay, rank of employees, and their level of job satisfaction. In his research, rank refers to individual's job status in an organization. It indicates whether an academic worker is a lecturer, senior lecturer, reader or a professor.

Theories related to job dissatisfaction

Two factor theory

Herzberg (1968) developed the two-factor theory of job satisfaction, identifying job satisfaction and job dissatisfaction as two separate concepts. This theory suggests that the intrinsic motivational factors like recognition, work task and responsibility generates positive job satisfaction whereas the absence of extrinsic-hygiene factors such as job security, salary or working condition generate job dissatisfaction. According to the theory, when hygiene factors are low, employees are dissatisfied.

Discrepancy theory

According to the Discrepancy theory (1969) the difference between the actual outcome and the expected outcome tells us about the satisfaction level of the employee. If the actual outcome is greater than the expected one, the employee would be more satisfied with their work and vice versa.

Equity theory

Equity theory by Mowday (1967) suggests that employees compare their input/output with the other individuals. If the ratio of one employee is equal to the other, the individual would be more pleased with his/her job. Equity has been associated with job satisfaction while inequality has been associated with job dissatisfaction.

Methodology

This research has been conducted as a descriptive type study. The population of this study comprises of all the junior female academics in the Faculty of Management Studies and Commerce and the Faculty of Humanities and Social Sciences at USJP. The size of the population was 50. Sample is 20 and the sample has been selected purposively. Purposive and random sampling methods have been used to select the sample. Primary data was collected by using in-depth interviews. Secondary data was collected using journals, documents and records of internet and previous research. Gathered data has been analyzed qualitatively using content writing.

Discussion

Factors affecting job dissatisfaction

Working environment

In this study, the above term refers to the place where the junior female academics are staying at the department, where the logistical facilities are provided for them (Wi-Fi, computer,

cupboard) and supportive environment for lecturing in terms of availability of technology and tools. Certain junior female academics showed total dissatisfaction with the limited facilities that they had been provided. However, this feature was to be seen in one faculty at the USJP while the other faculty showed satisfaction with the facilities that had been provided.

Work load

In this research, the term “work load” refers to the career related work that has to be carried out by junior female academics at USJP. It may include lecturing, administrative work, attending meetings, counseling, paper marking etc. According to the field data, “heavy work load” can be recognized as the main factor that has caused job dissatisfaction of junior female academics at USJP.

Advancements

In this study, the respective term indicates the academic advancement of junior female academics, which is the ability to conduct researches and their higher education. Although the main occupation of this career is teaching and researching, they have been compelled to neglect the researching component due to the other extra activities that they have been assigned to do.

Empowerment

According to the junior female academics, they have been given the opportunity to partake in the process of decision making. However, certain cultural barriers has discouraged the junior female academics’ participation in the said process. According to the field data, the junior female academics are less likely to be controlled; less likely to be directed. Majority of the academics in the sample seek independence in their work believing that they have the required skills and competency.

Recognition

Generally, ‘recognition’ means the appreciation one gets for doing a better job. There were some respondents in the sample who had been selected for the respective job because of the recognition of this job. Although the situation is like that, the respondents in the sample showed dissatisfaction towards the recognition that they are receiving.

Work relationships

In relation to the junior female academics, mainly, three kinds of relationships can be identified. They are relationships with the supervisor, relationships with colleagues and relationships with non- academics. In this study, the relationships with the supervisor mean, the relationship with the Dean of the Faculty and Department heads. Colleagues include both male and female junior and senior academics at USJP. Relationship with non-academics means, maintaining relationship with the non- academic members.

The majority of the sample was satisfied with their Departmental heads. According to the data gathered, it can be stated that almost all the junior female academics maintain a good relationship with their colleagues. However, as per the idea of the junior female academics, the cubical culture in the academic staff promotes individualism. Maintaining relationships with non- academic staff has been problematic for some junior academics. According to them, the non- academics perceive academic staff to be a different kind of people and they have been neglected by themselves. Although there are some problems, almost all, in the sample had a good perception regarding work relationships.

Findings

As per the in-depth interviews conducted by the researcher, two levels of job satisfaction in junior female academics, could be seen, they are namely, “satisfied” and “dissatisfied”. The study reveals that no junior female academic is fully satisfied with their job or fully dissatisfied with their job. According to the findings, there are factors that have caused the job dissatisfaction of junior female academics. According to this study, the factors affecting the job dissatisfaction were problems related to the work environment, work relations, advancement, empowerment, recognition and work load. To overcome those dissatisfactory factors, this study has suggested recommendations such as fair treatments, rewarding hard work, good induction process, promote autonomy, assigning meaningful tasks and providing required facilities.

This study also has some limitations. Firstly, it has considered only a few factors which affects job dissatisfaction. Therefore, more factors can be included in future studies. Secondly, this study has been conducted only in one state university, but this study can be extended to other public universities as well in Sri Lanka. Because of that reason, there is a difficulty in generalizing this research. Therefore, it is better to conduct future researches, among a large number of universities to have a general idea of the job satisfaction of junior female academics

Recommendations

Giving recommendations to enhance the job satisfaction of junior female academics at USJP is one of the objectives of this study. Accordingly, the researcher adds a question in the semi-structured questionnaire requesting the junior female academics’ recommendations to enhance their job satisfaction. The recommendations forwarded by them are being summarized as follows.

Fair treatment

The junior female academics at USJP seek fair treatment for them. They are of the opinion that the work/responsibilities should be distributed for juniors equally without any favors towards anyone. They believe that it will also help them to manage their work load, which will eventually lead to an increase in their level of job satisfaction.

Increasing junior academics

They also recommended for a fresh recruit, increasing the number of junior academics, which will then enable them to share the heavy work load and be further satisfied with their job.

Encouraging junior female academics to gather additional knowledge

According to the junior female academics’ view, there is not enough time for them to gather additional knowledge with the heavy work load. If they are provided enough room to conduct researches and read more, they will be further satisfied. They suggested that it had to be done through assigning a manageable work load for junior female academics.

Empowering

The findings of this study show that the junior female academics are not satisfied with the authority they have. Therefore, they seek adequate opportunity for them make an influence on the decision making without any discrimination. Therefore, it can be recommended that if the junior academics are encouraged to present their ideas, they will be much satisfied.

Promote autonomy

Junior female academics are not wholly partial to close supervision at all times. They believe that they are educated enough to handle their work. According to the ideas they expressed, it was identified that, they possessed the necessary talents, capabilities and strength to do their respective tasks. However, it was stated that most of the senior academics had not yet recognized them.

Good induction process

There is a lack of induction in this job when compared to the other jobs. Specially, many organizations tend to give a proper induction when it recruits a new employee, to enhance future performances. As such induction is not available in this job, hence there is a probability for the occurrence of mistakes from junior academics. It was further stated that it creates a negative perception in the senior academics towards the junior academics and they believed that it would also create relationship problems. According to the respondents' ideas in this study it was revealed that providing a proper induction will minimize the problems mentioned above.

Rewarding hard work

It was believed that rewarding hard work will satisfy junior female academics and motivate them to sacrifice more to do work. According to their ideas, the rewards should not necessarily be in monetary terms, it can be done even from a word which does not incur any cost. Almost all the respondents in the sample were seeking recognition for the heavy work load they are doing.

Add more value to the job

A tendency can generally be observed in students who obtain the best results, opting out for other corporate sector jobs rather than remaining at the university as a tutor. Therefore, there is a necessity to find out the reasons why they tend to shift to corporate sector jobs. Hence the opinion was that if more value is created for the job, the junior female academics will be much satisfied and the excellent students who record the best academic performances would join the university and remain at the university.

Assigning meaningful works

Another suggestion was for the junior female academics to be assigned only for meaningful tasks. That means administrative works should be fulfilled by the administrative staff allowing the academics to feel free with them.

Providing required facilities

There should be a mechanism to find out the requirements of junior female academics and those should be provided to them as much as possible to improve their job satisfaction.

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Organizational Commitment: A Survey of Sri Lankan Academia

Sewwandi, D. K.¹

University academics are the “Jewel” of higher education sector in any country. Quality of the graduate and the recognition universities hold locally and internationally significantly reflect the commitment of academic staff to their work and to their institutions. In a context where academic commitment is not subjected to adequate investigation, this study aims at identifying the level and nature of academic commitment with a view of paving the path to more comprehensive studies on the area. Questionnaire survey was conducted and 387 academic staff covering all 15 state universities participated in the survey adequately representing each university. Mean statistics were basically used for arriving at conclusions on the nature of their organizational commitment in terms of affective, normative and continuance commitment. Mean values suggested that Affective commitment dominates the behaviour of academics in general, yet the role played by other two types of commitments is more or less similar. High continuance commitment among respondents indicate potential risk of a more cost driven attachment where absence of associated costs may hinder the level of commitment severely. Therefore, this study provides insights to the university administration to see the real nature of academic commitment and address the potential issues and challenges. This is prominent today where many initiatives are taken to produce quality competent global graduates to the nation and when its true responsibility lies in the hands of academia.

Keywords: *Affective Commitment, Continuous Commitment, Normative Commitment, University Academics*

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¹ Department of Organizational Studies Faculty of Management Studies, The Open University of Sri Lanka, Sri Lanka (dksew@ou.ac.lk)

Introduction

Commitment or attachment towards a certain object is considered crucial in any context. The “object” under concern may be a job, individual goal, occupation or an organization creating different versions of commitment such as job commitment, goal commitment, occupational commitment or organizational commitment (Meyer & Herscovitch, 2001). No matter what type of “object” that the individual directs his or her behaviour, the level of attachment an individual hold toward the object decides the level of success in achieving that objective, completing a particular task or thriving in one’s career.

When considering the extant literature, organizational commitment has gained much attention of scholars in particular where impressive levels of research efforts have been taken place to understand its nature and effects on organizational outcomes. It is the attachment an employee has towards his or her organization and the resulting willingness to remain its membership to the organization (Allen and Meyer, 2000; Luthans, 2006). When considering the workplace, organizational commitment has drawn the attention of many employers as it is considered as key to enhance performance and employee retention in the organization (Adeyemo, 2007; Allen & Meyer, 1990). Organizational commitment is said to be positively related to organizational outcomes such as job satisfaction and performance and negatively associated with absenteeism, turnover, burnout, etc. (Adeyemo, 2007; Allen & Meyer, 1990; Banyhamdan, Harrim & Al-Qotop, 2012; Campbell & Hwa, 2014; Jayarathne, 2016; Shepherd & Mathews, 2000; Wainaina, Iravo & Waititu, 2014). In the juncture, non-committed employees may indirectly inhibit organization’s ability to recruit quality and competent employees by spreading bad word-of mouth (Mowday, Porter & Steers, 1982).

Even though organizational commitment has an extensive research history, studies related to organizational commitment is very limited in educational setting and even more scares in Sri Lankan educational context. Most of the research in the field is by industrial-organizational and occupational psychologists (Muller, Wallace & Price, 1992). When considering the Sri Lankan higher education industry, especially universities organizational commitment should gain an extensive attention given the increasing number of academics leaving the country for greener pastures. Nonetheless, adequate attention to date cannot be seen. Among the limited number of studies available, a study by Gunawardena and Nawarathne (2017) provided clear evidence that an increased brain-drain is taking place in Sri Lanka as academics are not satisfied and are frustrated about many aspects of work life, significantly on organizational related issues.

Academic staff can be considered as the backbone of the country’s higher education industry due to their role in the learning process of thousands of students in the nation. Their role does not limit to teaching. Their capacity as intellectuals is evident everywhere in national as well as international level in terms of research, experiments, policy making, etc. The recognition that Universities gain as institutions is a part and parcel of the high caliber of academic staff and their contributions. Therefore, indisputably the level of commitment of academic staff to their job and to their institutions are of greater importance to ensure delivery of quality graduates to the society and to the recognition and survival of Sri Lankan universities at the presence of growing competition in the higher educational industry.

Literature suggests that job commitment is much evident among academia over organizational commitment (Jayarathne, 2016; Winter, 2009). Such phenomenon is common among professionals as they consider their profession as a passion rather than a mere job. However the fact that academics are much job committed does not hinder the importance of studying their organizational commitment. Even a highly job committed individual can be discouraged

to perform at lower levels by the presence of unfavorable working conditions. Provided that, this study aims at identifying the nature of organizational commitment of academic staff which unlike job commitment, can vary depending on many institutional variables.

Literature Review

As a variable, commitment holds researchers' interest in organizational behaviour studies similar to job satisfaction (Allen & Meyer, 2000). Even though with an extensive research history, still it is a popular area of exploration. Over the years organizational commitment has been subjected to the attention of the employers as it is considered as a key determinant of enhanced performance and reduced employee turnover over. It has been defined by various scholars in diverse perspectives. However, a close look at many definitions on organizational commitment highlights several common characteristics of organizational commitment; (a) there is a bond to the organization, which is necessarily psychological (b) individuals adopt the values and ways of the organization and willing to be identified with the organization (c) willingness to exert efforts towards achieving organizational goals (Sewwandi, 2018).

Allen and Meyer (2000) define organizational commitment as “a psychological state that characterizes an employee's relationship with the organization for which s/he works and which has implications for the employee's intension to remain with the organization” (p. 286). According to Newstrom and Davis (as cited in Dehaghi, Goodarzi & Arazi, 2012) it is one's belief in the mission of the firm, willingness to extend effort in its accomplishment and intentions to continue working at the organization. Much similar and behavioural perspective of the term is suggested by Luthans (2006) identifying it as a combination of a strong desire to remain as a member of an organization, willingness to exert effort towards organizational goal achievement and acceptance of the values and goals of that organization.

There are many unidimensional (works of Becker in 1960; Mowday, Steers & Porter in 1979) and multidimensional conceptualizations of organizational commitment (works of Angel and Perry in 1981, O'Reilly and Chatman in 1986, Panley and Gould in 1988, Meyer and Schoorman in 1992 and Jaros et al., in 1993 as cited in the study of Meyer & Herscovitch, 2001). Among all, “The Three Component Model” proposed by Allen and Meyer (1990) is considered prominent where organizational commitment has been conceptualized as a state of mind. The model they proposed depicts three different mind-sets of an individual; Affective, Normative and Continuance, towards organizational commitment (Meyer & Herscovitch, 2001). According to them individuals have all three types of commitment in them but one type dominates their behaviour.

Affective commitment is the emotional attachment towards the organization. When an employee is emotionally attached to his or her organization that employee is said to be *enjoying* the membership of the organization. Kanter ,1968 (as cited in Meyer & Allen, 1991) who originally puts forward this construct as “cohesion commitment” defines it as “the attachment of an individual's fund of affectivity and emotion to the group” (p.2). Most of the uni-dimensional models of organizational commitment is based on this fact of commitment and considered as prominent in deciding an individual's committed behaviour. When an individual is with affective commitment that individual exhibits more citizenship behaviours and performance and less turnover and absenteeism (Rego & Cunha, 2008). Employees with strong affective commitment remain because they *want to* remain within the organization.

Normative commitment is where organizational commitment is viewed as a belief about one's responsibility to the organization (Allen & Meyer, 1990). It is generated through one's moral obligation towards the organization. Wiener (1982) suggests the term organizational

commitment itself is normative in nature. According to him organizational commitment is the total of internalized normative pressures that lead an individual's behaviour to meet organizational goals solely out of moral obligation. According to Meyer and Allen (1991), familial or cultural pressures exist prior to enter to the organization, socialization process takes place following entry, rewards in advance by the organization which automatically creates a bond and substantial costs incurred by the organization upon employment are possible sources of normative commitment.

Considered as unhealthy in many situations (Rego & Cunha, 2008), continuance commitment reflects one's perception on the 'Switching costs' associated with employment. These are the costs that employees associate with leaving the organization (Allen & Meyer, 1990). Side-bets or investments and existence of alternative opportunities are considered as the predominant antecedents of continuance commitment. Here employees decide to continue their tenure within the organization because they *need to* do so (Meyer & Allen, 1991). Once these side-bets hold no more attraction, this instrumental bond gradually dissolves.

Commitment of individuals to their organizations can be explained using Social Exchange Theory (SET). This theory forwarded by George C. Homans in 1958 is considered as one of the most influential concepts for understanding workplace behaviours such as commitment of individuals (Cropanzano & Mitchell, 2005). It views social behaviour as an exchange relationship between parties. The theory suggests that "Social exchange comprises actions contingent on the rewarding reactions of others, which overtime provides for mutually and rewarding transactions and relationships" (Cropanzano & Mitchell, 2005, p.890). Although the roots of social exchange can be traced back to different disciplines like anthropology, sociology and social psychology, every different interpretation of the theory converge into the ideas that social exchange involves a series of interactions which generate obligatory bonds which are interdependent and contingent on actions of another (Blau, 1964 as cited in Cropanzano & Mitchell, 2005). SET is built on the notion that relationships evolve overtime into more loyal and trusting mutual commitments. The resources of exchange can be either economic or socioemotional outcomes where economic outcomes address financial needs of the participants and the latter addresses one's social and esteem needs (Cropanzano & Mitchell, 2005).

Methodology

This is quantitative study where survey method was used to gather data for assess the level of organizational commitment of the respondents. Out of a population of 8170 permanent and temporary academic staff (UGC, 2018), 387 staff members covering all 15 state universities responded to the study. Number of elements to be included in the sample was decided based on Krejcie & Morgan (1970) table for sample size for a given population size. Accordingly, the corresponding sample size for a population of 8, 170 was 367. Nevertheless, 387 valid responses were received out of 400 questionnaires distributed, hence 387 were considered as the sample size of this study. Convenience sampling was employed to select the elements of sample. The total sample size was proportionated based on the total number of academic staff employed at each university.

Both primary and secondary data have been used to conduct this study. Survey data obtained through self-administered questionnaires is the source of primary data based on which the analysis and conclusions were reached. UGC reports of the statistics on university academics, theoretical and empirical findings from various research articles comprised secondary data used in the study.

Data on organizational commitment of respondents were gathered using a standard questionnaire initially developed by Allen and Meyer in 1990 based on their “Three component model of commitment” covering affective, normative and continuance commitment. The questionnaire consisted of 24 questions with 08 questions measuring each type of commitment. All the questionnaire items used in the questionnaire of this study were derived from the Allen and Meyer’s questionnaire with few modifications done to the terminology to suit the academic context. Five point Likert scale indicating level of agreement to the statements ranging from strongly agree (5) to Strongly disagree (1) were used to record responses.

Questionnaire items proved a high internal consistency reliability with alpha values of 0.855 (Affective Commitment), 0.823 (Continuance commitment) and 0.831 (Normative commitment). Mean statistics were used to assess the levels of each type of commitment.

Findings of the Study

The sample consisted of number of faculties covering eleven Academic streams; namely Agriculture, Applied Sciences, Architecture, Arts, Education, Engineering, IT, Law, Management, Medical Sciences and Visual Arts. Majority of the respondents were from Management discipline (54.52%). Discipline of Arts represented the second highest number of respondents with a percentage of 18.60%. Other disciplines were represented as Agriculture (3.62%), Applied Sciences (6.46%), Architecture (0.26%), Education (0.52%), Engineering (6.46%), IT (1.03%), Law (1.81%), Medical Sciences (4.39%) and Visual Arts (2.33%). Majority of the sample was female and between 25-35 years. Nearly half of the respondents (45.22%) had service experience of 1-5 years. Table 1 depicts a brief overview of other demographic variables of the sample profile. A brief overview of the sample profile is illustrated in Table 1.

Table 1: Sample profile

Gender	Male: 40.83%
	Female: 59.17%
Age	25 – 35 years: 66.15%
	36 – 45 years: 22.48%
	46 -55 years: 9.56%
	More than 56 years: 1.81%
Marital Status	Married: 57.88%
	Unmarried: 42.12%
Experience	Less than one year: 18.35%
	1 – 5: 45.22%
	6 – 10 years: 17.83%
	11 – 15 years: 7.55%

	16 – 20 years: 5.94%
	More than 20 years: 4.91%

Source: Survey data (2019)

Mean values of three commitment types were in moderate levels where Affective commitment reported the highest and much enriched mean of 3.754. Normative and Continuance commitment are about average with mean values of 3.476 and 3.516 respectively. Overall, organizational commitment of academic staff reported as moderate with a mean value of 3.582.

Table 2: Mean statistics of three types of organizational commitment

Commitment type	Mean value
Affective commitment	3.754
Continuance commitment	3.516
Normative commitment	3.476

Source: Survey Data (2019)

Discussion and Recommendations

As emphasized in this study, identifying the nature of commitment is equally important as identifying the overall level of organizational commitment of employees. There may be instances where a favourable single number indicating commitment does not clearly reflect the hidden negative aspects of commitment which will be a threat to the organization around the corner. Results obtained in the present study supports this phenomenon.

Organizational commitment of the academic staff is moderately high in all their facets while Affective commitment dominates their behaviour. There is also a moderate level presence of Normative commitment and continuance commitment which indicates that there is a part of commitment within the academics driven by the moral obligation to remain in their universities as well as by perceived cost of leaving the university. These findings are in line with previous research which suggested moderate level of organizational commitment among academic staff (Jayarathne, 2016).

Findings of this study calls for two main implications. Firstly, the fact that academic staff reflects a moderate level of attachment to their respective universities should brought in to the attention of university administration. When the commitment is moderate there is high chance it can be damaged easily by institutional or work related factors. This shows a gap in commitment which calls for measures from the work units or universities to enhance the commitment levels of academic staff. Higher the attachment of the staff to their institutions better their service will be for students and other stakeholders. Even though their job commitment is high in nature, discouraging administrative practices can harm their professional pride. Therefore, this is the high time for the university administration to closely look into the loopholes in the system which demotivate the academic staff and lessen their commitment toward the institution. This can be initiated from the work unit or academic departments by way of systematic surveys, interviews especially on academics who leave university system prematurely.

An increasing trend that can be observed in Sri Lankan Universities is that academics are overloaded with administrative work. These administrative responsibilities sometime may

utilize the time available for academic affairs thus can become a significant source of stress and dissatisfaction overtime. As meaningful work is considered as a source of emotional attachment (Gavin & Mason, 2004; Jurkiewicz & Gicalone, 2004; Rego & Cunha, 2008), heavy administrative work may result in hindrance of such attachment of academics toward their work units. What academia perceives as meaningful work are assignments which have a deeper value for them and to the stakeholders they interact with. They seek fruitful utilization of their time and consider contribution to society as their core responsibility. Therefore, it is suggested to pay a careful attention in balancing academic and administrative components of academic work assignments.

Secondly, higher instrumental commitment indicates a potential area of risk. In any case, increasing calculative commitment is not considered as a healthy condition for any organization (Rego & Cunha, 2008). Irrespective of the fact that this instrumentality derives from psychological or material sources, when employees are attached to their workplace based on cost-benefit terms, they do not tend to exert their fullest effort but limit their performance to an extent which secures their employment.

Even though a higher instrumental commitment was not expected from a community of intellectuals, a higher mean value shows that there is a considerable impact of perceived associated costs of employment for academics as well. This value is even higher than the normative commitment suggesting academic commitment is more driven by associated costs than moral obligations to remain with the university. As suggested by Meyer & Allen (1991) this can be a result of any kind of factors, physical or psychological that increase the perceived cost of leaving the institution. Consequently, it is apparent that there is a part of an academic's commitment which is driven by this "side-bet" which they do not want to lose. Universities should properly understand these side-bets which hold the academic staff into their organizations and make sure that there are no any loose ends. As this type of commitment is purely instrumental, when such bonds are not available resulting commitment also weakens. This may explain the increase in number of academics migrate for better prospects abroad when their expectations and professional values are not met by existing university system (Gunawardena & Nawarathne, 2017).

This study provides the basic platform for further studies in to organizational commitment in higher education industry. Findings of this study reveal that there is a commitment gap that should be properly analyzed and understood in terms of its antecedents and consequences. Further studies, both quantitative and qualitative can be pursued on the factors that enhance or hinder the commitment of academic staff. Qualitative approach may produce much promising results as organizational commitment is more personal phenomena directly attributable to individual's attitudes and/or behaviour. This also can be tested with many organizational outcome variables such as performance, satisfaction and turnover. Variables such as perceived organizational support, gender, job tenure can be included as moderating or mediating variables in those studies. Such broad understanding of the committed behavior of academia will immensely contribute to the betterment of both academics and universities hence creating a win-win scenario.

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Individual Factors of Employee Engagement in Organizational Performance

Rajapaksha, R. A. S.¹ and Tilakasiri, K. K.²

An organization's success and profitability depend upon the performance of its employees. Business leaders know that a high-performing workforce is essential for the achievement of strategic business goals. The objective of this study is to identify the individual factors of employee engagement in Organization performance. In this study, "Employee Communication, Employee Development, Reward & Recognition, and Leadership" are used as the independent variables and "Employee Engagement in Organizational Performance" is used as a dependent variable. The target population consists with workers in SMEs relating to Colombo district (This is the commercial capital and largest city of Sri Lanka by population) in 2019 year. The current study has used Stratified sampling method for selecting 249 employees to collect the data from the survey by representing all management levels. This study has used Pearson correlation analysis to identify the relationships between independent and dependent variable. According to the analysis results, the study concludes the findings as follows; there is a significant positive relationship between employee communication and employee engagement in organization performance, there is a significant positive relationship between employee development and employee engagement in organization performance, there is a significant positive relationship between reward/recognition and employee engagement in organization performance and there is a significant positive relationship between leadership and employee engagement in organization performance.

Keywords: *Employee Communication, Employee Development, Employee Engagement, Leadership, Reward & Recognition*

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¹ Department of Accountancy, University of Kelaniya, Sri Lanka (2017_ashen@kln.ac.lk)

² Department of Accountancy, University of Kelaniya, Sri Lanka

Introduction

Background of the Study

An organization's success and profitability depends upon the performance of its employees. Business leaders know that a high-performing workforce is essential for the achievement of strategic business goals. Therefore, it is important that the employees are fully committed towards the organization's goals and are motivated to give their best efforts for the achievement of these goals. The concept of employee engagement in the organizations is gaining importance. Employee engagement can be a deciding factor for an organization's success in today's competitive world. Employees, regardless of the nature of business, are one of the key resources of a company. At a time when competition for the best specialists is often stronger than efforts to obtain the client, the ability to successfully manage relationships with employees can decide on the long-term market advantage. Through the creation of a friendly, development-enabling environment that leads to employee engagement, employers can increase their chances of hiring and retaining valuable employees. Numerous reports suggest a low level of employee engagement worldwide.

According to the Gallup Institute, globally only 15% of workers can be described as fully engaged in their work, while 85% are not engaged or are actively disengaged (Gallup, 2017). The causes of the deepening "disengagement crisis" lie in the absence of support to employees in achieving what they perceive for themselves as meaningful results (Forbes, 2014). The academic community also sees the problem of low employee engagement and its negative impact on business outcomes.

According to Teresa Amabile of the Harvard Business School, cited in Forbes (2014), it leads to lower level of company revenues and deterioration of its profitability indicators. The crisis, in the context of innovation, productivity, and performance, has also been noticed by the UK Government. The Department for Business, Innovation and Skills (2009) has confirmed the low level of employee engagement in Great Britain and the negative consequences of this state of affairs on the UK economy. The worldwide nature of the problem suggests the need for research on the impact of employee engagement on the organization, as well as synthesis of the results, in an attempt to draw practical, universal lessons.

Employee engagement is one of the most crucial factors of the organization's performance and its success. Wilkins (2007) defined employee's engagement as a situation where employees are motivated to deliver high level of performance with developing commitment, loyalty, productivity and ownership. That employees' engagement is a set of positive attitudes which employees have towards the organization's performance and benefits (Robinson, 2004). According to Towers Perrin (2003), developing employee engagement is a process that never ends and emotionally enriches work experience. Further, he defined engagement is not about making people happy, or paying them more money. Havill (2010) pointed out that knowing the level of employees' engagement within the organization is the foundation for change and its success. This study explores that what is the impact of employee's engagement on organization performances in SMEs in Sri Lanka.

Employees' engagement is one of the key driver of company performance as explained in the introduction, so these two combinations could be viewed as more valuable and decisive for any entity. Further, it focuses on challenges in improving employees' engagement and it investigates the key areas to focus on employee engagement. Since lack of studies which are carried out on employee engagement on organization performance in Sri Lanka, this study will help organizations which are looking for further improvements in employee engagements. Further, findings of the study will be helpful to each type of managers as well

as shop floor employees. Further, this study will enlighten people's concern on aspects of positivity of employee engagement in improving organization performances.

Research Problem Identification

The management expected high engagement of employees to improve the company performances by enhancing productivity, quality, cost, delivery, safety improvements in manufacturing process. Lockwood (2007) stated that employees' engagement is a key business driver for the organization success. According to the Key Performance Indicators (Productivity, Quality Inflow, Defects in Line, Cost Saving, Absenteeism) reviewed at the companies monthly, quarterly performance reviews, highlighted that still Performances of some areas are lower than the companies expectation level. However according to the pilot survey analysis showed that, still some arrears are not sustainable position. Those are lower than the expected level (Productivity, Quality Inflow, Defects in Line, Cost Saving, Absenteeism).

Further, above all indicators show the gap of Organization performance and employees involvement. Therefore, there will be a huge requirement to meet the companies' expectation and there is a big requirement to build up members' positive engagement. As per the all above identifications, it can be emphasized that there is a gap between employees' engagement on organization performances as expected by the management.

Research Question

This study examines the individual factors of employee engagement in organizational performance: evidence from SMEs in Sri Lanka. In order to achieve this purpose, this study attempts to address the following research questions.

- What is the relationship between employee communication and organizational performance?
- What is the relationship between employee development and organizational performance?
- What is the positive relationship between reward and recognition and organizational performance?
- What is the positive relationship between leadership and organizational performance?

Objectives of the Study

Objectives of the study are:

- To identify the relationship between employee communication and organizational performance?
- To identify the relationship between employee development and organizational performance?
- To identify the relationship between reward and recognition and organizational performance?
- To identify the positive relationship between leadership and organizational performance?

Literature Review

Employee Engagements

Employee engagement is a comparatively latest concept in the academic society but it has been deeply furthered by consulting firms (Wefald & Downey, 2009). Scholar articles & many

researches in HRM arena pointed out employees engagement is attached with behaviour at work of the organization.

Employees' engagement has also been defined as an individual's involvement, satisfaction and enthusiasm for their work (Harter et al. 2002). Further, this definition is derived from items in the Gallup workplace audit (GWA 1999), developed by the Gallup organization. Soldati (2007) analysed eight drivers of employee engagement is included in following areas,

- Trust and integrity: this means how good managers and leaders maintain better communication.
- Career Growth opportunities: This defines possibility of the opportunity in the future to grow their career.
- Employee development: this is explained as involvement of the company to the employees' development and makes them skilled.
- Relationship co-workers and team members: here defines that influencing to grow the engagement at each level.
- Better relationship with managers, nature of the job of the employees and lining employees' performance and company performance: it means each employees need to understand how contribution for the company performance.

Many researches have described that different factors can affect to the employee engagement in any organization. Ruyle, Eichinger & De Meuse (2009) have identified many factors are affecting employee engagement.

- Strategic Alignment – Employees work with aligning the business which they have understood how business drive
- Trust in Senior Leadership – senior leaders' behaviour effect to build-up the good engagement and they trust the seniors and follow up
- Immediate Manager Working Relationship – This explains that better relationship always helps employees performance and retention of employees.
- Peer Culture – Strong peer culture builds up good relationship and highly in engagement and it links with organization's performance.
- Personal Influence – Need to recognize new ideas that are generated by employees so it helps to do the thing in a better way
- Nature of my Career – All employees should be given a clear career path with development plans and give the opportunity to grow themselves with the company and employee goals
- Career Support – This means giving opportunity with special assignment that will develop them and build up strong engagement with organization
- Nature of the Job – Nature of the job support to build better engagement so it gives challenges for their job so that will fit to improve skills, qualification and experience and finally they will be with organization.
- Development Opportunities – Providing development opportunities is a major factor to build up better employee engagement in any organization. This means giving formal and informal learning opportunity. Finally which improves their skills and knowledge
- Employee Recognition – Employees recognition directly contributes to improve the employee engagement
- Pay Fairness – Equitable payment is based on performance which help to develop the motivation of the employees. So it links with employee's engagement.
- GCC stands for "Gulf Cooperation Council" which is explaining that the following factors are affected to the employee engagement. They specially pointed out that

employee's point of view both party management and employees have responsibility to build up the better engagement in the organization. However, from the management point of view it has a major part to establish the better process sustain the engagement.

- Job Importance – It explains how each employee knows that their job is so important to the organization therefore the management is responsible to emphasize this to each employee so that will build up better relationship and it helps to build up employee engagement
- Clarity of what is expected of them – Employees point of view they should know as well as they should have better idea on what Managers expect from them, so if not managers have to explain them what they expect from employees. This mutual understand affects the better engagement.
- Career Advancement – Each employee prefers to have career development, so equal opportunity on performance can build up trust with management and employees should have good awareness regarding career performance and advancement. It helps to build up engagement with organization.
- Improvement and Reward – Rewarding is the major part of the engagement here they explain; employees do the improvement for the organization performance so it has to be recognized by the management as well as there should be a way to recognize the employees regularly.
- Regular Feedback – GCC states that regular feedbacks are able to point out improvement areas of the employees as well as perform areas to keep it up and that can build up the better understanding between both parties.
- Good Relationship – Communication in between employees and managers are an essential thing. Better communication builds up better relationship with both parties and if there are strong communication mechanism employees deliver even small news to the management, that is one of the major impacts to the better employee engagement
- Clear values – Understanding of values is the major thing to maintain better engagement, each employee should have a clear idea about the company values and how they should behave with the company values.
- Good Communications – Employees should know what is happening in the present of the organization and as well as what will happen in future also they need to have an idea. Thus good communication between both employees and organization will build up strong relationship.

Organizational Performance

Organizations have a significant role in our lives, successful organizations deliver substantial return to the community. Continuous performance is the key factor for organizational performance of any organization as it is the only way of growing & sustaining the business. Thereby organizational performance is one of the main factors to conduct researches and logically the most important factor in an organization. This, in principle, to recognize as a performing organization, it should be effective (reach the set goals) and efficient (by consuming minimum resources). Organizations reach its performance goals facing on the constraints resulted by the resource limitations (Lusthaus & Adrien, 1998). Here profit has become the main performance indicator. Performance includes both financial & Non-financial indicators which shows the achievement of the goals of the organization (Lebens & Euske, 2006).

The process of performances measurements in the terms of KPI's is totally depending on the performance assessment users. Most probably those users are managers and supervisors. In

addition to that nature of the firm, its objectives, and usual trends in the industry may influence for the selection process of performances measures (Lebas, 1995; Cable and Davis, 2004; Amaratunga et al., 2002; Hinks, 2004; Egan and Joeres, 1997; Cripps, 1998). However, users to users and according to their purposes the selection of performance indicators may vary (Lebas, 1995). However most of the users select those indicators in accordance to their ultimate expectations and the goals, Baldwin et al. (2000). Among those indicators the customer related metrics mainly cover the output and provide related indicators target on the implementations of process. However private and public nature of the firm also has a direct influence over the selection of performances indicators.

Relationship between employee engagement and Organization performances

Employee Engagement is a very important factor for the employee's performance as well as organization's success. This is proved by the positive consequence both employee and organization, as well as work engagement also do the positive experiences Schaufeli (2002). He further deliberated that there are huge positive outcomes from building positive Employee Engagement.

Both practitioners and academic literature as well as major consultant firm have pointed out there is a close connection between Employee Engagement. Further profitability increases through higher productivity, increase sales, customer satisfaction, as well as employee's retention, (Bakker and Leiter, 2010). Peter (2018) has shown that organizations with high employee engagement excel in customer satisfaction and achieve high productivity and operational efficiency, as well as profitability with the additional side effect of safe, healthier employees with lower absenteeism and reduced turnover. This study will address how to encourage employee engagement in general and, having achieved that, how that process can be directed toward driving stellar safety performance.

Methodology

Based on the literature review, following Conceptual framework was developed.

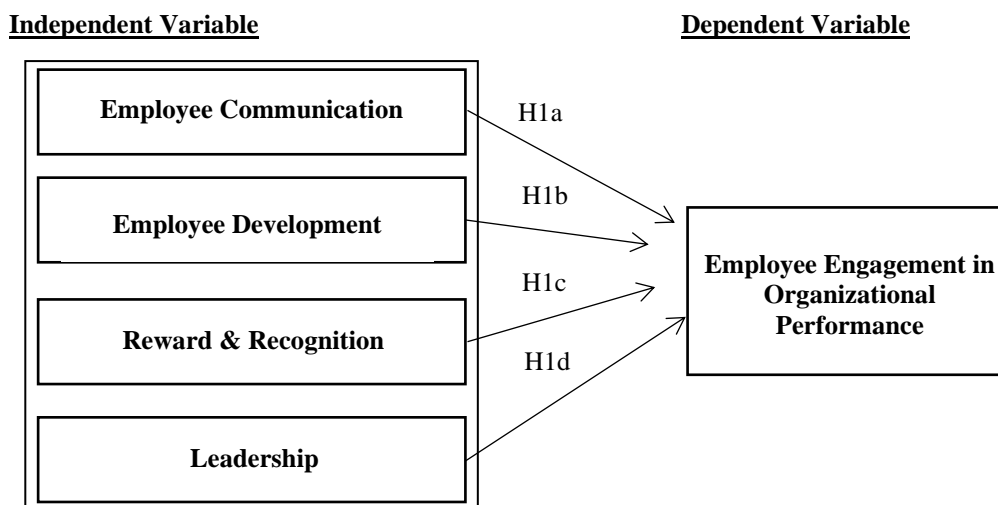


Figure 1: Conceptual Framework

- H1a: There is a significant relationship between employee communication and employee engagement in organizational performance
- H1b: There is a significant relationship between employee development and employee engagement in organizational performance
- H1c: There is a significant relationship between reward/recognition and employee engagement in organizational performance
- H1d: There is a significant relationship between leadership and employee engagement in organizational performance

Population, Sample & Data collection

Target population consists with individual workers at SMEs in Colombo district relating to 2019 year. This is the commercial capital and largest city of Sri Lanka by population. Colombo district employees represent the all island employee population. The study can reduce the area differences between employees by using Colombo district. The current study is used Stratified sampling method for selecting 249 employees to collect the data from the survey by representing all management levels. This study uses Pearson correlation analysis to identify the relationships between independent and dependent variable.

Data Presentation and Analysis

Reliability of the questionnaire has been tested using Cronbach's alpha reliability test, by taking 249 questionnaires from employees who work in SMEs in Colombo. Below table illustrates the results of Cronbach's alpha value derived through reliability test.

This questions are developed based on past literatures (Rena, 2013) and modified them according to the research requirements. According to above Cronbach's alpha values the reliability of the questionnaire can be proved since all the values are greater than 0.7. Reliability statistics for Entire Questionnaire is given in above table and Cronbach alpha is 0.885. It proves that the reliability is good.

Table 1: Reliability test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.880	.885	16

Descriptive statistics are used to explain the patterns and general trends in collected data and those are as follows.

Table 2: The distribution of individual and organizational factors

Item	Mean	Standard Deviation (SD)
Employee communication	1.9948	.38951
Employee development	3.3180	.52649
Rewards and Recognition	2.5050	.59749
Leadership	2.8767	.88169

Source: SPSS output from field information

Table 1.2 exhibits the summary of descriptive statistics for the variable values used in the sample. The summary of descriptive statistics contains the mean and standard deviation of independent variables.

Pearson correlation coefficient is used to identify the strength of the relationship between dependent and independent variables of the study and the hypothesis are stated in order to identify whether the relationship is significant or not.

Table 3: Correlation analysis

Variables		Employee Communication	Employee Development	Reward & Recognition	Leadership
Employee engagement in organizational performance	Pearson correlation	.841**	.743**	.682**	.698**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	249	249	249	249

Source: SPSS output from field information

Table 1.3 shows that the correlation between independent variables (employee communication, employee development, reward & recognition, leadership) and dependent variable (organizational performance).

H1a hypothesis examines relationship between employee communication and employee engagement in organization performance. The result shows probability value as .000, it is significant at 95 percent significant level which will lead to reject null hypothesis. Moreover, the value of the Pearson correlation (r) is 0.841. It means there is a significant and strong positive relationship between employee communication and employee engagement in organization performance.

H1b hypothesis examines relationship between employee development and employee engagement in organization performance. The result shows probability value as .000, it is significant at 95 percent significant level which will lead to reject null hypothesis. Moreover, the value of the Pearson correlation (r) is 0.743. It means there is a significant and strong positive relationship between employee development and employee engagement in organization performance.

H1c hypothesis examines relationship between reward/recognition and employee engagement in organization performance. The result shows probability value as .000, it is significant at 95 percent significant level which will lead to reject null hypothesis. Moreover, the value of the Pearson correlation (r) is 0.682. It means there is a significant and strong positive relationship between reward/recognition and employee engagement in organization performance.

H1d hypothesis examines relationship between leadership and employee engagement in organization performance. The result shows probability value as .000, it is significant at 95 percent significant level which will lead to reject null hypothesis. Moreover, the value of the Pearson correlation (r) is 0.698. It means there is a significant and strong positive relationship between leadership and employee engagement in organization performance.

Conclusions and Recommendation

Objective of this research is to identify the individual factors of employee engagement in organization performance. As well as to identify the most influential factors for employees engagement in organization Performance in the SMEs in Sri Lanka. According to Pearson correlation analysis Employee Communication, Employee development, Reward & Recognition and Leadership have significant positive relationship with employee engagement in organization performance.

Key Features	P-value	Decision
Employee communication	.000	There is a significant positive relationship between employee communication and employee engagement in organization performance.
Employee development	.000	There is a significant positive relationship between employee development and employee engagement in organization performance.
Rewards and Recognition	.000	There is a significant positive relationship between reward/recognition and employee engagement in organization performance.
Leadership	.000	There is a significant positive relationship between employee leadership and employee engagement in organization performance.

According to the outcome derived through Pearson correlation, SMEs have to highly consider on below factors.

With reference to employee communication, study is expected to identify whether the employees are aware of the objectives of the organization for improving its performance and whether Employees are connected to get opinions and suggestions to improve performance.

According to Pearson correlation analysis, employee communication has Strong positive significant relationship and employees' engagement in organization performance. Therefore, existing employee communication within organization should be maintained and improved. Any adverse impact on existing employee communication system will have a big impact on employee engagement in organization performance management and hence organization performance will be decreased significantly.

Further under employee development, study is expected to identify whether the employees are equipped with materials and knowledge to implement lean manufacturing system. According to Pearson correlations analysis, employee development has strong positive significant relationship employee development and employees' engagement in organization performance. Therefore, employee development within organization should be improved for the success of lean engagement.

Through reward and recognition factor, this study has tried to identify how the performance appraisal and rewarding effect on employees' engagement. Accordingly though there is a significant relationship between reward/recognition and employees' engagement in

organization performance, according to the results, there is a need of enhancing reward and recognition system to improve the organization performance.

When it comes to leadership factor, it has positive impacts towards employees' engagement in organization performance. Therefore, organization has to consider the team leaders', supervisors' methods of motivating employees towards organization performance.

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Affective Commitment: The Role of Work-life Balance and Organizational Pride (with special reference to XYZ Glove Manufacturing Company in Sri Lanka)

Nadeeshani, M. H. C. S.¹ and Nishanthi, H. M.²

For any organization, ensuring the employment of a committed work force is detrimental for their future success. Of which creating an affectively committed employee is even harder. Even though many determinants of affective commitment and work-life balance (WLB) have been extensively researched, the impact of organizational pride on these main variables were not significantly visible especially in the Sri Lankan context. Hence, the major purpose of this study was to identify the impact of WLB on affective commitment by exploring the mediation of organizational pride. The current study is a cross sectional study comprising a sample of 134, junior executive and above level, employees in XYZ Company. The data was gathered using the simple random sampling technique through a standard questionnaire that was distributed via google doc. and paper – pencil surveys. The hypotheses were tested using the Pearson correlation coefficient, linear regression analysis.

Findings revealed that WLB has a significant positive impact on affective commitment as well as organizational pride. Further, it was revealed that organizational pride has a significant impact on the affective commitment of junior executive and above level employees in XYZ company. Apart from that, organizational pride partially mediated the relationship between WLB and affective commitment. Hence, it is concluded that organizational pride has a considerable impact on enhancing the relationship between WLB and affective commitment.

Keywords: *Affective Commitment, Junior Executive and Above Level Employees, Organizational Pride, Work-life Balance*

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¹ Department of Human Resource Management, Faculty of Commerce and Management Studies,

University of Kelaniya, Sri Lanka (*chalanishashi123@gmail.com*)

² Department of Human Resource Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka (*menaka@kln.ac.lk*)

Introduction

One of the biggest challenges for organizations is getting work done from employees (Saha & Kumar, 2018). Organizations cannot achieve a competitive advantage and their objectives without effectively managing their human resources. They should be handled with care and patience. Spagnoli and Caetano (2012) stated that retaining and attaining commitment from that talent pool has become a key challenge today. Organizational success depends on the employees of the organization and their commitment to a set of values, principles or beliefs (Gulbahar, Ali Ch, Kundi, Qureshi, & Akhtar, 2014). Therefore, employee commitment towards the organization is one of the essential things for the success of the organization.

There are many researchers (Steers 1977; Mowday, Porter, & Steers, 1982; Meyer & Allen, 1991) who have built up numerous definitions to recognize the term of organizational commitment. According to Meyer and Allen (1991, p.67), "organizational commitment is a psychological state that (a) characterizes the employee's relationship with the organization, and (b) has implications for the decision to continue or discontinue membership in the organization". Similarly, Allen and Meyer (1990) created a better representative model of commitment including three forms of elements as affective, continuance and normative commitment. Out of Allen and Meyer's three commitment model, it has been noted that affective commitment has been given major prominence by scholars (Mercurio, 2015; Nishanthi & Kailasapathy, 2018). Affective commitment is one of the three components of organizational commitment, representing a psychological state toward one's organization that is comprised of both attitudinal and behavioral components (Allen & Meyer, 1990; Meyer & Allen, 1991). According to Rani and Samuel (2018), affective commitment is fundamental and self-determined while normative and continuance commitment are driven by feelings of obligation or pressure to be attached. Hence, more than continuance or normative commitment, affective commitment is seen to have a stronger correlation to positive attitudes and behaviors such as high job performance, attendance, and organizational citizenship behavior, as well as low turnover, stress and work-family conflict (Meyer, Stanley, Herscovitch, & Topolnysky, 2002). Hence, affective commitment has been considered an important determinant of employee dedication and loyalty (Rhoades, Eisenberger, & Armeli, 2001).

According to Stallworth (2003) experiences of the employee in the work environment, organizational and personal characteristics are associated with affective commitment. Specific aspects of the work environment comprised of job scope, appearances of employee's role in the organization and the relationship between employee and supervisor, job challenge and degree of autonomy (Dunham et al, 1994, as cited in Stallworth, 2003). In accordance with the above statements, employee work-life balance is one of the key contributors for organizational success. Further, Mendis and Weerakkody (2017) stated that in the current dynamic business environment, work-life balance has become one of the key issues faced by many employees all over the world. Maintaining work-life balance is an issue recognized as of strategic importance to the organization and significance to employees. It is a broad concept that encompasses prioritizing between work (including career and ambition) and life (including areas such as health, leisure, family, pleasure and spiritual development) on the other (Tharsiny & Sareena, 2015).

When considering the concept of organizational pride, Fischer and Tangney (1995) said that pride is one of the most powerful psychological forces that people can experience. Further, Kraemer and Gouthier (2014) stated that organizational pride plays a central role in companies. Similarly, Appleberg (2005) denoted that organizational pride positively influences the decision to stay in a company and stimulates employee commitment. Hence,

organizational pride is an important factor that increases the relationship between employee work-life balance and affective commitment towards the organization. Further, Machuca, Mirabent, and Alegre (2016) mentioned that organizational pride enhances employees' enthusiasm and creativity. Similarly, organizational pride positively affects the choice to stay in a company and stimulates employee commitment.

Looking at the study context, it is a fact that the manufacturing sector is one of the leading investment tools in Sri Lanka's economy. The glove manufacturing sector is the subset of the rubber manufacturing sector. It has a considerable impact on the Sri Lankan GDP. In terms of GDP, the rubber sector has a contribution of around 1.5% to the GDP and a contribution of about 8% of total national export income (Sri Lanka Society of Rubber Industry, 2015). When analyzing the demographics, researchers observed that it is mostly the young employees who are working in the glove manufacturing industry. It is the same with XYZ company, a well-reputed Glove manufacturing multinational company in Sri Lanka. Through cultural observations and informal discussions, it was noted that in XYZ, recently, most of the employees have tried to resign from the organization. Some employees were absent and receded from their works. The company records also showed that there is a high labour turnover rate and absenteeism rate among the junior executives and above level employees in XYZ company. According to the company records, the average junior executive and above level employees' turnover and absenteeism rate gradually increased in the past few years. The average turnover rate was recorded 7.5% in year of 2017 and 8.2% in year of 2018, respectively. It increased by up to 8.5% in year 2019.

Further average absenteeism rate increased from 4.5% in 2017 to 4.7% in 2018. Even though it decreased to 4.4% in 2019 (HR Department of XYZ, 2019), there was a considerable increase in labour turnover up to 8.5% from 7.5%. According to Nishanthi and Kailasapathy (2018), employee absenteeism and turnover rates can be considered as the outcome of organizational commitment. This further justified through the informal discussions that the researchers had with selected junior executive and above level employees. Hence it can be concluded that there is a lack of commitment in employees in XYZ company.

A pilot survey was conducted by taking 30 employees randomly to validate the above problem. Researchers found that junior executive and above-level employees' affective commitment was at a mean value of 3.04 out of 7 (refer Annexure I). Hence, there is an issue of a lack of commitment among employees in XYZ company. Also, some employees highlighted that they retain with the organization as they are proud to be a member of that company. Even though they are suffering from their family matters they have attitudinal pride towards the organization. Based on the above justifications, researchers intended to identify whether there is an impact of employee work-life balance and organizational pride on the lack of affective commitment in the selected glove manufacturing company in Sri Lanka.

The significance of this study can be shown on the theoretical ground as well as on empirical grounds. The concepts of work-life balance and organizational commitment have been researched by many scholars in different contexts (Danaeifar, Gharaei, Hasani, Mirzaei, & Abangah, 2016; Li, 2018; Akter, Hossen, & Islam, 2019). Several research has been conducted regarding work-life balance (Mendis & Weerakkody, 2017; Padmasiri & Mahalekamge, 2016) and separate research studies on organizational commitment (Sawithri, Nishanthi, & Amarasinghe, 2017; Nishanthi & Kailasapathy, 2018). Even though there are many studies (Gnanayudam & Dharmasiri, 2007) on work-life balance and organizational commitment together, only a very few studies (Mercurio, 2015; Rhoades, Eisenberger, & Armeli, 2001) have been conducted considering the work-life balance and affective commitment. However, in the Sri Lankan context, the researchers could not find any research

published considering organizational pride as a mediator among the relationship between work-life balance and affective commitment using glove manufacturing companies as the sample. This study will help to raise awareness of the key determinants of work-life balance, organizational pride, and affective commitment and investigate the impact of work-life balance on employee affective commitment with the mediating effect of organizational pride.

Literature Review and Hypotheses Development

Organizational Commitment

Commitment is important to successful long-term relationships (Fullerton, 2003). Organizational commitment is defined by (Meyer & Allen, 1991, p.67) as "a psychological state that characterizes the employee's relationship with the organization, and has implications for the decision to continue or discontinue membership in the organization". Allen and Meyer (1990) developed a model comprising of three-components, to address the observed similarities and differences in existing unidimensional conceptualizations of organizational commitment (Mowday Porter and Steers, 1982; Wiener, 1982) and labeled them as affectivecontinuous commitment and normative commitment. Allen and Meyer (1990) defined the 'affective component of organizational commitment' as the employee's emotional attachment to, identification with, and involvement in the organization. The 'continuance component' indicates commitment based on the cost that the employee associates with leaving the organization. The 'normative component' shows the employee's feelings of obligation to stay with the organization. Accordingly, Meyer and Allen (1997) defined 'affective commitment' as emotional belongingness towards organization, 'continuous commitment' as a cost linked with leaving of an organization, further 'nominative commitment' was explained as the feelings of obligation to be with the employer.

Emami and Darabi (2012) stated that organizations are planned to have more highly committed workforce because results show that organizational commitment leads to important consequences such as reduced turnover, increase of employee motivation, increase of organization citizenship behavior and organizational support. Further, some researchers (Natarajan, 2011; Payne & Huffman, 2005) have specified that managing a committed workforce would result in positive consequences to the organization such as increased productivity, organizational performance, employee satisfaction and lower absenteeism.

Affective Commitment

Affective commitment is a dimension of a multi-commitment work environment. Affective organizational commitment is resultant of different outcomes such as quality of work-life variables involving satisfaction with relations, hobbies, place of residence, satisfying life, health condition, physical fitness etc. (Kumari & Afroz, 2013). Affective organizational commitment is viewed as an employee attitude likely to be influenced by perceived age discrimination (Ensher, Grant-Vallone, & Donaldson, 2001). Simply affective commitment is the employees' attachment with their organization (Saha & Kumar, 2018). The affective commitment is initially defined as an employee's emotional attachment to, identification with, and involvement in the organization (Allen & Meyer, 1990; Meyer & Allen, 1991; Meyer & Allen, 1997). Allen and Meyer (1990) specified that organizational commitment is one in which commitment is considered an affective or emotional attachment to the organization such that the strongly committed individual identifies with, is involved, and enjoys membership in the organization. Also, affective commitment is a work related attitude with positive feelings towards the organization (Morrow, 1993). Kumari and Afroz (2013) cited from Lee and Mowday (2007) argued that employees who have high organizational

identification levels have enhanced feelings of belongingness to their organization and are more psychologically attached to it. Affective commitment tends to correlate more strongly with any given outcome variable, including the focal behavior (Allen & Grisaffe, 2001).

Today, it is clear that most of the organizations are in a continuous struggle to survive and achieve their visions and goals due to the extended industrial rivalry and dynamic work settings (Prasadika & Nishanthi, 2018). Hence, retaining the best talent and getting their commitment as a source of competitive advantage has become a challenge in the current business environment. (Prasadika & Nishanthi, 2018). Lutuilean and Prasetyo (2019) concluded that the tendency of a worker who stays with a company is based on an emotional attachment. An employee who is affectively committed to his or her organization might be more likely to be attached to his or her organization to join and be active in relevant work-related decisions (Saha & Kumar, 2018). Hence, employee commitment becomes a significant source of competitive advantage (Meyer, Becker, & Vandenberghe, 2004).

According to Allen and Meyer (Allen & Meyer 1990; Meyer & Allen, 1991; Allen & Meyer, 1997) among the three mindsets of commitment, affective commitment has been found to correlate most strongly with the organizationally relevant outcomes such as retention, performance, organizational citizenship behavior and employee-relevant outcomes such as wellbeing, less stress, less work-family conflict (Schoemmel, Jonsson, & Jeppesen, 2015). Further, Meyer, Stanley, Herscovitch, and Topolnysky, (2002) highlighted that affective commitment can be distinguished as having a particular explanatory power concerning individual and organizational variables. Geraldine, Madeira, and Carvalho (2019) mentioned that commitment components are negatively associated with a set of behaviors harmful to the organization and are positively associated with factors favorable with its continued operation.

If an organization provides the background in which employees can provide high service quality, a higher commitment is expected (Steffen, Nystrom, & O'Connor, 1996), this might reveal on the one hand, the relationship between affective organizational commitment and workload, which in this study is measured in the form of perceived staffing and resource adequacy. Some researchers (Sawithri, Nishanthi, & Amarasinghe, 2017; Karsh, Booske, & Sainfort, 2005; Rai, 2012) have proposed a linear relationship between higher workload and lower affective organizational commitment. Rodwell, Noblet, Demir, and Steane (2009) have determined that high and low job demand levels led to lower affective commitment, while moderate levels of demand lead to higher affective commitment. Further, Karsh, Booske, and Sainfort (2005) have found that the organizational quality environment was the strongest antecedent of commitment, which included aspects such as time provided for improvement and the degree to which the organization rewarded quality. This leads us to expect that a higher overall quality of care should be positively related to affective organizational commitment. Also, Karsh, Booske, and Sainfort (2005) have found that the organizational quality environment was the strongest antecedent of commitment, which included aspects such as time provided for improvement, and the degree to which the organization rewarded quality. This leads us to expect that a higher overall quality of care should be positively related to affective organizational commitment. Schalk (2011) demonstrated that higher affective organizational commitment was related to less reported health complaints. A possible mechanism between affective commitment and health complaints might be that higher commitment protects employees from the effect of stressors (Meyer, Stanley, Herscovitch, & Topolnysky, 2002).

Furthermore, the affective organizational commitment was negatively related to absenteeism, though more strongly with voluntary than involuntary absenteeism. The lack of employees' affective commitment creates adverse outcomes, such as turnover intention and low

productivity. On the other hand, the high level of employees' affective commitment to their organization increases in-role performance (Chen & Francesco, 2003; Mathieu & Zajac, 1990; Swailes, 2004).

Work-life Balance

Work-life balance has developed into a significant theme during the last two decades, which has seen substantial growth of work caused by economic uncertainty, organizational restructuring, and an increase in business competition (Hughes & Bozionelos, 2007). Hence, organizations demand higher performance and commitment from their employees, which is translated into expectations for working longer and for prioritizing work over personal life to respond to the new conditions (Hughes & Bozionelos, 2007). Employees' attitudes toward their organizations and life are affected by work-life balance (Azeem & Akhtar, 2014). Mendis and Weerakkody (2017) defined it as the amount of time you spend doing your job compared with the amount of time you spend with your family and doing things you enjoy. Maertz and Boyar (2009) as cited in Nilashini and Sajeewanie, (2018) consider work-life balance as a specific combination of organizational policies, organizational practices and programs and a philosophy that automatically supports employees to achieve work and family responsibilities successfully. Work-life balance is unique to each person, and its accomplishment mostly depends upon the fulfillment of personal life values, priorities and aspirations following one's social context (Greenhaus & Allen, 2011).

Currently, managing conflict between work and life is a big challenge for organizations and individuals. Previous researchers (Tepper, Moss, & Duffi, 2011; Wu, Kwan, Liu, & Resick, 2012) demonstrated that abusive supervision is related to higher work-life conflict levels. Hence, keeping a balance between work-life is a necessary thing. Individual or group autonomy, supervisor support (Machuca, Mirabent, & Alegre, 2016), top management commitment, hours of work, work schedule, employees' responsibilities (Dizaho & Othman, 2013) are factors that have been considered as antecedents of work-life balance. Also, work-life balance must be supported and encouraged at all levels of the organization, including senior management, line managers, and all staff (McPherson, 2007). According to Azeem and Akhtar (2014), involvement of the top management and commitment are the necessary factors that affected employee work-life balance. Further top management used various strategies to increase employee work-life balance, such as family-friendly policies, work/ life programs, work/ family culture.

The achievement of better work-life balance can yield dividends for employers in terms of having a more motivated, productive, less stressed workforce, increased productivity, and reduced absenteeism (Mendis & Weerakkody, 2017).

Organizational Pride

Pride has traditionally been linked with an individual's feelings of joy and meaningfulness (Tracy & Robins, 2007). Promoting organizational pride is one of the challenges faced by a manager in every organization. Because pride relates to a person's self-esteem and self-worth. Organizational pride is a valuable psychological resource that people should enhance and it constitutes an intrinsic motivator for employees (Machuca, Mirabent, & Alegre, 2016). According to Eagly and Chaiken (1998), pride is an attitude and presents a psychological tendency based on the overall evaluation of a person or an object. Organizational pride is an emotion, involving a high appreciation for and a strong emotional attachment to the organization (Machuca, Mirabent, & Alegre, 2016). Emotions of organizational pride contribute to employee open-mindedness regarding new information and, thus, lead to the consolidation of knowledge (Fredrickson, 1998 as cited in Gouthier & Rhein, 2011). There

are two forms of organizational pride; emotional and attitudinal pride which are mainly studied under a theoretical paradigm called Affective Events Theory Invalid source specified. Further, Kraemer and Gouthier (2014) refers to Organizational pride as an encouraging constructive work environment that needs high social recognition with the organization.

The emotional pride is regarded as an intense emotion during service jobs, which however has scarcely been investigated so far in management research (Goudarzi, Llosa, Orsingher, Gouthier, & Rhein, 2011). In contrast to emotional pride, this kind of attitudinal pride is stable and not dependent on single events (Ajzen, 2001). Attitudes are psychological tendencies that result from the evaluation with some degree of favor or disfavor of a person or object (Eagly and Chaiken, 1998). According to the attitude theory, organizations are potential attitude objects (Ajzen, 2005). Hence, attitudinal organizational pride, refers to the individual's high degree of favor towards the company.

Relationship Between Work-Life Balance Organizational Pride and Affective Commitment

Generally, an employee has a strong sense of commitment under the condition that his/her expectations towards the workplace meet the job requirements (Huang, Lawler, & Yile, 2007). Kim (2014) mentioned that when employees' needs and expectations are fulfilled then they become more loyal to their organization.

Kashefi, Adel, Abad, Aliklayeh, and Nadimi (2013) stated that emotional commitment which is related to feelings, interests, tendency and expressing of individual's passions, will increase if some factors exist in organization; these include equity in paying, providing opportunity for growth and development, continuous job security, obeying laws and regulations, observing justice and equity, paying attention to society's needs and requirements, having a respect for society, union and solidarity between employees, and providing opportunities for expressing individual abilities. Also above mentioned factors increase an individual's interest and encourage him or her to have more motivation for performing the organization's affairs.

Casper, Martin, Buffardi, and Erdwins (2002) examined the impact of both work-to-life and life-to-work on affective and continuance commitment amongst employed mothers. Their findings presented that a positive relationship exists between work-to-life and affective commitment. Further Muse, Harris, Giles, and Feild, (2008) conducted a study regarding work-life benefits and positive organizational behavior. According to their conclusion, work-life balance positively affects employees' affective commitment to their organizations. Similarly, Casper, Harris, Taylor-Bianco, and Wayne's (2011) study also concluded that work-life balance positively affects affective commitment. The experience of work-life balance generates feelings of loyalty to the organization and increases affective commitment. Hence, organizations must understand that when employees perceive the increased organizational support for their work-life balance, the employees' affective commitment can be increased (Aube, Rousseau, & Morin, 2007). Further, some researchers have found that (e.g. Allen et al., 2000; Netemeyer, Boles, & McMurrian, 1996) work interference with family and family interference with work are negatively related to affective commitment.

Machuca, Mirabent, and Alegre (2016) studied the linkage between work-life balance and organizational pride. Their findings demonstrated a new relationship as employee work-life balance is positively related to organizational pride. Moreover, affective commitment is one of the three components of organizational commitment, representing a psychological state toward one's organization that is comprised of both attitudinal and behavioral components (Allen & Meyer, 1990; Meyer & Allen, 1991). Appleberg (2005) found that organizational pride positively influences the decision to stay in a company and stimulates employee

commitment. Further, Durrah, Chaudhary, and Gharib (2019) mentioned that organizational pride positively affects the decision to stay with a company and encourage employees' commitment.

Based on the reviewed literature, the authors developed hypotheses is as follows;

- H₁: There is a significant positive impact of work-life balance on affective commitment.
- H₂: There is a significant positive impact of work-life balance on organizational pride.
- H₃: There is a significant positive impact of organizational pride on affective commitment.
- H₄: There is a significant mediating impact of organizational pride on the relationship between work-life balance and affective commitment.

The conceptual model is shown in Figure 1.

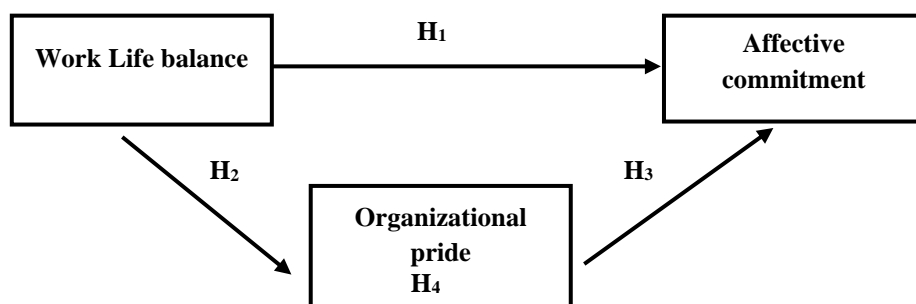


Figure 1: Conceptual Model of the Study

Source: Authors

Method

This is a cross-sectional study. The unit of analysis is the individual employee in XYZ Company (junior executive and above level). Out of 150 questionnaires distributed among the sample, 136 questionnaires were returned (response rate of 91%). Only 134 questionnaires were in a usable state (effective response rate of 89%). The researchers used simple random sampling as the sampling technique and data collection was carried out through a standard questionnaire. After the data collection was performed, data were analyzed using SPSS version 23. The hypotheses were analyzed using the Pearson correlation coefficient, linear regression analysis.

Measures

Employee affective commitment was measured using the scale developed and validated by Allen and Meyer (1990). Employee work-life balance was measured using the scale of Cain, Busser and Kang (2018). Organizational pride was measured by using the "attitudinal organizational pride" scale developed by Gouthier and Rhein (2011). In addition, the following demographic variables were measured: gender, age, civil status, higher education qualification, work experience and employee position.

Sample composition

The sample consisted of 134 junior executives and above level employees in XYZ glove manufacturing company. The majority in the sample were male employees, and the sample included 46.3% of female employees. Most (38.1%) belonged to the age category of 25-34 years, while few (8.2%) employees belonged to the class of 45-54 years. Married employees covered 61.9% of the sample and single employees represented 38.1%. The majority (37.3%) were bachelor degree holders, few (13.4%) employees have attained G.C.E. A/L qualification. There were 35.1% junior executive employees, 31.3% executive employees, 33.6% assistant manager, and above level employees.

Results

The mean, correlation and reliability statistics related to the variables in the model are shown in Table 1. Apart from these, a preliminary analysis was performed to test the study's validity, linearity, and normality. As per Table 01 of the study, the Cronbach's alpha is more than .7; thus, the research is deemed to be reliable.

Table 1: Descriptive statistic and Output of the Preliminary Analysis

Variable	Mean Value	Cronbach's Alpha	Correlation Analysis		
			AC	OP	WLB
Affective Commitment	3.77	0.842	1		
Organizational pride	3.79	0.703	.353**	1	
Work-Life Balance	3.79	0.781	.497**	.477**	1

** . Correlation is significant at the 0.01 level (1-tailed).

Source: Survey Data, 2019

Apart from the above, researchers used KMO (Kaiser-Meyer-Olkin) and Bartlett's Test, commonalities values and total variance table to measure validity. Kaiser (1974) recommends accepting values greater than 0.5 as acceptable in validity. Furthermore, values between 0.5 and 0.7 are average. Values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb.

Table 2 KMO and Bartlett's Test Results

			Affective commitment	Work life balance	Organizational pride
Kaiser-Meyer-Olkin Sampling Adequacy.	Measure of		.844	.779	.654
Bartlett's Sphericity	Test of Sig.		.000	.000	.000

Source: Survey data, 2019

According to the Table 2 above, three scales have shown a greater value than 0.5. Hence, the items formed a scale of reasonable internal consistency in its reliability.

Hypotheses Testing

Simple Regression analysis was used to test the hypothesis in the research study, and the following results were elaborated using the simple regression.

The result suggests that the impact of work-life balance on employee affective commitment is significant. Table 3 has provided R and R square values. The R-value represented the simple correlation, and that was 0.497, which indicated a moderate positive correlation. The R Square value indicates how much of the total variation in the dependent variable: affective commitment, can be explained by the independent variable: work-life balance. In this case, 24.7% of the variation in affective commitment is explained through work-life balance.

Table 3: Model summary- Work-life balance and affective commitment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.497 ^a	.247	.241	.73173

a. Predictors: (Constant), Work-life Balance

Source: Survey data, 2019

ANOVA (Analysis of variance) table (Table 4) reported how well the regression equation fits the data. According to the results, the regression model was significant ($F=43.219$, $p=.000$), and that indicated, that the regression model has statistically and significantly predicted the outcome variable. In other words, the work-life balance has significantly predicted the affective commitment.

Table 4: ANOVA - Work-life balance and affective commitment

	Sum of Squares	F	Sig
Regression	23.141	43.219	.000 ^b
Residual	70.677		
Total	93.818		

a. Dependent Variable: Affective Commitment

b. Predictors: (Constant), Work-Life Balance

Coefficients table (Table 5) has provided the necessary information to predict affective commitment from employee work-life balance. The Sig. value determined whether work-life balance contributed statistically and significantly to the model. According to the Table 5 below, the Sig. value was .000, which was less than .05. The .604 positive beta value represented a positive impact of work-life balance on affective commitment.

Table 5: Coefficients- work-life balance and affective commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.484	.354		4.195	.000
	Work-life Balance	.604	.092	.497	6.574	.000

a. Dependent Variable: Affective commitment

Source: Survey data, 2019

Hence, H₁: There is a significant positive impact of work-life balance on affective commitment was accepted.

Table 6 shows that the R-value represented the simple correlation: 0.477, and r² value represent .227. That means 22.7% of the variation in organizational pride explained by the work-life balance of employees.

Table 6: Model summary- Work-life balance and Organizational pride

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.477 ^a	.227	.222	.48992

a. Predictors: (Constant), Work-life Balance

Source: Survey data, 2019

According to Table 7, the regression model was significant (F=38.854, p=.000), and that indicated, the regression model statistically and significantly predicted the outcome variable.

Table 7: ANOVA - Work-life balance and organizational pride

	Sum of Squares	F	Sig
Regression	9.326	38.854	.000 ^b
Residual	31.683		
Total	41.009		

a. Dependent Variable: Organizational Pride

b. Predictors: (Constant), Work-life Balance

Source: Survey data, 2019

According to Table 8, the Sig. value was .000 which was less than .05. Further, the .384 positive beta value represented a positive impact of work-life balance on organizational pride. Hence H_2 is accepted.

Table 8: Coefficients- work-life balance and organizational pride

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.335	.237		9.858	.000
	Work-life Balance	.384	.062	.477	6.233	.000

a. Dependent Variable: Organizational Pride

Source: Survey data, 2019

In Table 9, the R-value represented the simple correlation which was .353 and r^2 value was .125. This highlights the fact that 12.5% of the variation in affective commitment is explained by organizational pride and can be said at a 95% confidence level.

Table 9: Model summary- Organizational satisfaction and affective commitment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.353 ^a	.125	.118	.78870

a. Predictors: (Constant), Organizational Pride

Source: Survey data, 2019

Table 10: ANOVA - Organizational pride and Affective commitment

	Sum of Squares	F	Sig
Regression	11.707	18.819	.000 ^b
Residual	82.111		
Total	93.818		

a. Dependent Variable: Affective Commitment

b. Predictors: (Constant), Organizational Pride

Source: Survey data, 2019

According to the table 11, the Sig. value was .000, which was less than .05. Same time the .534 positive beta value indicates that there was a positive impact of organizational pride on affective commitment. Thus H₃; There is a significant effect of organizational pride on affective commitment was accepted.

Table 11: Coefficients- Organizational pride and affective commitment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.749	.472		3.709	.000
	Organizational Pride	.534	.123	.353	4.338	.000

a. Dependent Variable: Affective Commitment

Source: Survey data, 2019

Further, the researchers used an online Sobel test calculator to identify the mediating effect of organizational pride on work-life balance and affective commitment. Figure 4.16 has visualized the result of the conducted Sobel test. (Annexure-II)

Input:		Test statistic:		Std. Error:	p-value:
a	0.384	Sobel test:	3.87683233	0.05120882	0.00010583
b	0.517	Aroian test:	3.84645983	0.05161317	0.00011984
s _a	0.062	Goodman test:	3.90793586	0.05080124	0.00009309
s _b	0.104	Reset all	Calculate		

Figure 2: Sobel Test

Source: Preacher & Leonardelli, n.d.

According to the above figure test statistic for the Sobel test is 3.88, with an associated p-value of 0.00010583. The fact that the observed p-value is below the established alpha level of .05, is indicative of the association between the (IV) work-life balance and the (DV) affective commitment is impacted significantly by the inclusion of the mediator (in this case, organizational pride) in the model. Hence, H₄; There is a significant mediating impact of organizational pride on the relationship between work-life balance and affective commitment was accepted.

Discussion and implications

The study examined the impact of work-life balance, organizational pride on employee affective commitment of junior executives and above level staff in XYZ glove manufacturing company in Biyagama Zone of Sri Lanka. Researchers developed four hypotheses for this study based on the literature. Casper, Harris, Taylor-Bianco, and Wayne's (2011), Casper, Martin, Buffardi, and Erdwins (2002) studies also concluded that work-life balance has a positive effect on affective commitment. The findings of this study revealed a significantly positive impact of work-life balance on affective commitment. Machuca, Mirabent, and Alegre (2016) study findings demonstrated that employee work-life balance is positively

related to organizational pride. The output of this study has shown that there is a significantly positive impact of work-life balance on organizational pride. Appleberg (2005) and Durrah, Chaudhary, and Gharib (2019) studied about the organizational pride and employee commitment and they confirmed a significantly positive impact on organizational pride and affective commitment which goes in line with H₃ of the current study. Findings further revealed that there is a significant positive impact on organizational pride and affective commitment. To identify the mediating effect of organizational pride on employee work-life balance and affective commitment researchers developed one hypothesis as H₄. According to the findings of this study, the respective hypotheses are accepted.

The findings of this study show that work-life balance is associated with organizational pride and affective commitment and will be useful for identifying reasons to uplift the organizational pride which would have a more significant impact on creating and increasing the relationship between work-life balance and affective commitment. Further, this study is useful for glove manufacturing companies and the various professionals in the business field, especially for the apparel sector organizations, to get the insights from the results and recommendations for this analyzed problem. In addition to that, this provides the information to review and revise their HRM practices in the way of increasing the employee work-life balance with the support from previous researches. Furthermore, this study provides theoretical and practical knowledge with the research guide for university students and to other interested studies.

Limitations

The selected population for the research is narrow because it is limited to the glove manufacturing industry out of the overall manufacturing industry. The researcher's objective was to identify the impact of work-life balance, organizational pride on affective commitment. The main limitation of this study is related to the sample design. The researcher only selected one glove manufacturing company as the sample. Further, the researchers have used simple random sampling as the sampling technique to gather data from the junior executive and above level employees in XYZ Company. Since it ignored the opinions of others, no data triangulation was visible. The results could be depending on their perception. Also, the design of the study is cross-sectional and a structured questionnaire was used for the data collection. Questionnaire responses may be wrong due to the participants deliberately changing the answer. The employees might not respond genuinely because of fear of mentioning ill about the organization. Also, the questionnaire was distributed only in the English language. Some employees might have difficulty in understanding the problem of the English language. Hence employees may not have answered the questions well.

Suggestions for Further Research

This research study has been conducted only for the glove manufacturing companies in Biyagama Zone, also covering only the junior executives and above level staff of selected glove manufacturing companies. Hence, further research is recommended to be conducted in other industries in the Sri Lankan context and target all employees in a particular industry to validate the findings. Future research can also be directed towards public sector organizations, of which the different sets of findings may be expected on the impact of work-life balance and organizational pride on employee affective commitment. The researchers used only a questionnaire to gather data. Hence, it is recommended to triangulate data using multiple methods such as interviews, focus group discussions on validating the findings. It is also suggested to conduct a longitudinal study regarding this problem through increase of the sample size in the future. Limited numbers of studies were found taking organizational pride

as a mediator. Thus, researchers recommend conducting in-depth research studies on these concepts taking diverse industries and enlarged samples.

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Annexure

Annexure- I: Pilot test output

Cronbach's Alpha	N of Items
.816	8

Reliability Statistics- Affective commitment

Cronbach's Alpha	N of Items
.750	6

Reliability Statistics- Work-life Balance

Cronbach's Alpha	N of Items
.734	3

Reliability Statistics- Organizational pride

Descriptive statistic- Affective commitment

			Statistic	Std. Error
Affective Avg	Commitment	Mean	3.0583	.07831
		95% Confidence Interval Lower Bound for Mean	2.8982	
		Upper Bound	3.2185	
		5% Trimmed Mean	3.0324	
		Median	3.0000	
		Variance	.184	
		Std. Deviation	.42893	
		Minimum	2.38	
		Maximum	4.25	

	Range	1.88	
	Interquartile Range	.44	
	Skewness	1.065	.427
	Kurtosis	1.423	.833

Annexure -II: Mediator analysis tool**Variables Entered/Removed^a**

Model	Variables Entered	Variables Removed	Method
1	Work-life Balance ^b	.	Enter

a. Dependent Variable: Affective Commitment

b. All requested variables entered.

Direct relation (Work-life Balance & Affective commitment)**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.497 ^a	.247	.241	.73173

a. Predictors: (Constant), Work-life Balance

ANOVA^a

Model		Sum Squares	df	Mean Square	F	Sig.
1	Regression	23.141	1	23.141	43.219	.000 ^b
	Residual	70.677	132	.535		
	Total	93.818	133			

a. Dependent Variable: Affective Commitment

b. Predictors: (Constant), Work-life Balance

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.484	.354		4.195	.000
Work-life Balance	.604	.092	.497	6.574	.000

a. Dependent Variable: Affective Commitment

Indirect M**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.477 ^a	.227	.222	.48992

a. Predictors: (Constant), Work-life Balance

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.326	1	9.326	38.854	.000 ^b
	Residual	31.683	132	.240		
	Total	41.009	133			

a. Dependent Variable: Organizational Pride

b. Predictors: (Constant), Work-life Balance

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.335	.237		9.858	.000
Work-life Balance	.384	.062	.477	6.233	.000

a. Dependent Variable: Organizational Pride

Indirect X and M**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.514 ^a	.264	.253	.72592

a. Predictors: (Constant), Work-life Balance, Organizational Pride

ANOVA^a

Model		Sum Squares	df	Mean Square	F	Sig.
1	Regression	24.786	2	12.393	23.518	.000 ^b
	Residual	69.031	131	.527		
	Total	93.818	133			

a. Dependent Variable: Affective Commitment

b. Predictors: (Constant), Work-life Balance, Organizational Pride

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.952	.463		2.058	.042
	Organizational Pride	.228	.129	.151	1.767	.080
	Work-life Balance	.517	.104	.425	4.982	.000

a. Dependent Variable: Affective Commitment

Effect of Road Traffic Congestion on Stress at Work: Evidence from the Employees Working in Metropolitan Areas of Colombo, Sri Lanka

Weerasinghe, T. D.¹, Karunarathna, D. I. M.² and Subashini, B. L. C.³

Though the conventional concept of ‘work stress’, its causes and consequences have been adequately discussed in the extant literature, a very little attention has been given to study the ‘stress at work’; especially, the employees’ stress at work which arise due to the experience in traffic congestion. Hence, bridging that lacuna in the literature, and re-constructing the two variables, the current study was initiated to assess the effect of experience in traffic congestion on employees’ stress at work. Predominantly adopting the hypothetico-deductive approach, this study was conducted among a sample of 420 individual employees prone to traffic congestion in metropolitan areas in Colombo. Purposive convenience sampling was used to select the sample whereas the Hair method was used to determine the sample size. Primary data were collected by adopting standard measurement scales via an online questionnaire survey. Data analysis was done with the aid of SPSS and Excel by employing Exploratory Factor Analysis (EFA) and the multivariate techniques of hypotheses testing. Building on the findings of this study, it is concluded to be considered that the experience in traffic congestion as a significant predictor of employees’ stress at work. Therefore, it is recommended for individual employees who are risked at the frequent road traffic congestion to mindfully develop the awareness of, and the readiness for traffic congestion and appropriate coping skills. Further, it is recommended for employers to provide an adequate amount of opportunities for such employees to relax at work.

Keywords: *Metropolitan Areas, Stress at Work, Traffic Congestion*

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¹ Department of Human Resource Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka (tdmdananjaya@gmail.com / dananjaya@kln.ac.lk)

² Department of Human Resource Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka (dimkarunarathna@gmail.com)

³ Department of Human Resource Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka (blcsubashini@gmail.com)

Introduction

Traffic congestion becomes a major concern in present-day around the world. This has greatly affected the day-to-day activities and lifestyles of all the parties in the society. This situation is crucial since it has the power to change certain government policies and has even prompted the changes in governments in different countries. Therefore, this problem cannot be ignored, because it adversely affects people, businesses, development of the countries' economy, and the level of effectiveness (Lomendra, Sharmila, Ganess & Vandisha, 2018). Further, it has been identified that societies pay a heavy price for traffic congestion. It creates negative consequences such as: environmental pollution, lost time of commuters, and increased spending on gasoline, higher number of road accidents etc. (ECLAC, 2004; Currie & Walker, 2011; Seyedabrishami, Mamdoohi, Barzegar, & Hasanpaur, 2012).

It is a well-reported fact that the traffic congestion in Colombo, Sri Lanka has been drastically increased during the past 20 years, where individuals and businesses operating in Colombo city get interrupted in their daily activities (Kumarage, 2004; Fernando & Fernando, 2016). It has come to the light that traffic congestion of Colombo has been increased beyond its capacity level and, it is higher than in other cities of the country. Thus, motorists, pedestrians, traffic police officials, and the general public confront many difficulties. The day-to-day life of the general public; including attending domestic affairs, office duties, etc. and business operations are getting delayed and disturbed due to this situation. They often experience unforeseen delays, painful experience on roads and ultimately this hinders the vehicle speed and block the smooth vehicle movement in the city. According to the State Time Convergence Index (STC), the present vehicle speed in Pettah (*Pettah is one area of the Colombo City*) as five KM (5km) per hour due to traffic congestion (Wijaya Newspapers Limited, 2012). Thus, this is generally a huge wastage of working hours and losing an innumerable number of rupees of income to the economy.

Colombo is the main commercial city of Sri Lanka. Hence, many companies, leading schools, hospitals and other government offices are located in the central city, and many people are daily visiting the city to fulfil their purposes. Further, the Colombo Harbor is situated within the city, and it limits the road capacities due to a large number of heavy vehicle movements for transportation of shipping containers. Furthermore, most of the star class tourist hotels are also located in the central city resulting in a large number of tourist vehicle movements between Bandaranayke International Airport and Colombo. Moreover, the city is considered the transportation hub in which it links many main roads of the country. Generally, as the main commercial city of Sri Lanka almost many personnel livings at wherever the country is compelled to come to Colombo for some reason which increases the vehicle congestion in Colombo city. Similarly, it is identified that road accidents within the Colombo city have been increased during the past ten years up to a considerable number because of road traffic congestion. For an example: Sri Lanka Police Department reported that 36,599 road accidents have happened in 2017, and as a result 3,147 people have lost their lives. Out of the total number of traffic accidents happened in 2017, 12.4% of them (*4,545 accidents*) were reported from the Colombo city area (Department of Census and Statistics of Sri Lanka, 2018).

Numerically, 1.5 Million of floating population (*in addition to resident population*) daily visit Colombo to attend their office duties (Fernando & Fernando, 2016). Majority among them use private transportation modes (*including three-wheelers, motorbikes, cars and office transports*) and some of them use public transportation modes (*trains and buses*). As a result of that considerable amount of vehicles makeover daily visit to the city causing a heavy traffic congestion; especially during the peak hours. Studies have found that over 500,000 vehicles daily operate in the Colombo city (Nuhuman, 2015). The peak hours on Colombo roads are

the early hours of the morning (7.00 am to 9.00 am) when most workers commute to work and late afternoon (4.30 pm to 6.30 pm) when they return back to their homes. Further, unformalized road systems, careless driving behaviors of drivers create an extremely unpleasant experience to commuters during those peak hours. Thus, it wastes more time of commuters on roads and may cause a delay in arriving to work or miss business meetings etc.

However, there might be yet another hidden cost of traffic congestion. Researches have argued that traffic congestion in metropolitan areas is likely to impact on mental health of individuals. Thus, many researchers emphasized that traffic congestion becomes a silent source of everyday stress among all road users of the metropolitan areas (Hennessy & Wiesenthal, 1997). People constantly try to follow a certain schedule in their lives and they rarely consider the possibilities of traffic congestion. When an individual stuck in a situation of honking, traffic, pressure or over-stimulation, he/she tends to feel a lack of control, helplessness and ultimately creates higher stress. Once the mental status exceeds their tolerable level, they might lose their concentration on roads and, it might end up getting hurt themselves or others. Therefore, this situation cannot be ignored. In line with that, there are many empirical studies found which were conducted to examine the traffic impact on the stress level of road users.

Conversely, contemporary researchers have significantly neglected examining the effect of road traffic congestion on stress at work. Commuting home to work also becomes a part of the workers' lives, and they also face this painful experience which in turn affects their lifestyle as well. For an instance: some workers might reduce their sleeping time and get up early to avoid the road traffic. Additionally, there are several reported cases of workers who tend to leave the workplace earlier, and also some of them deliberately stay longer at work to escape traffic congestion. Sometimes they get tired, stressed up (Lomendra *et al.*, 2018) and loss the concentration on their work, occasionally getting angry before the work begin (Assiseh *et al.*, 2015). Psychologically, when a person is incessantly open to a negative experience, it negatively affects the mental & physical health (Hansson, Mattisson, Björk, Östergren, & Jakobsson, 2011) and ultimately on his/her work and life satisfaction as well (Stutzer & Frey, 2007). Indeed, many organizations receive regular complaints about daily traffic congestion from their employees, and also the situation has become a major concern of organizations today. By considering the above facts it is evident that investigating the effect of road traffic congestion on employees' stress at work who are in metropolitan areas of Colombo, Sri Lanka is significant. Thus, the current study would bridge the existing research gaps discussed above in the selected domain in Sri Lanka up to a significant extent.

Statement of the Problem

Traffic congestion within Colombo has increased drastically during the past two decades. The situation has gravely affected day-to-day activities and lifestyles of both commuters and residents. Most of them face extremely unpleasant experience in traffic jams. Further, commuters who visit Colombo daily for attending office duties also suffer from this situation. They are getting stuck on roads and get stressed before attending their official duties. This hinders the organizational effectiveness & productivity as well as the development of the entire economy.

Moreover, Fernando and Fernando (2016) emphasized the need for investigating the untapped portion of employees' stress at work that arises due to road traffic congestion. Further, a shortage of up-to-date empirical evidence to validate the said association is found in the extant literature. Hence, having identified the aforementioned *empirical gap, knowledge gap and the contextual gap*, the below problem is raised in the current study:

What is the effect of road traffic congestion on stress at work of the employees working in the metropolitan areas of Colombo, Sri Lanka?

Objectives of the Study

The main objective of this study was to assess the effect of road traffic congestion on stress at work of the employees working in the metropolitan areas of Colombo, Sri Lanka. Further, below two specific objectives were established in order to achieve the purpose of the present study.

- To re-construct the variable of experience in road traffic congestion.
- To re-construct the variable of employees' stress at work arises due to road traffic congestion.

Literature Review

Stress at Work

Stress is a widespread phenomenon of the human lifespan. It is the way how people react both physically and psychologically to changes, events and situations in their lives. People experience stress in different ways for different reasons at different levels as stress is a subjective state of humans. The term originally derived from the Latin word of '*stringere*' which means strain, hardship, adversity or affliction (Prasad, Vaidya & Kumar, 2016). Though the term has a Latin origin the terminology has been discussed in many domains including theology, sociology, psychology and psychopathology (Trivellas, Reklitis & Platis, 2013). The term was first used by Hans Selye in 1936 (*who is considered the father of stress studies*) in biological terms (as cited in Ganster & Rosen, 2013). Selye (1936) defined stress as a non-specific response of the human body to any demand for a change of stressors. Further, he described that stressors are the factors that might lead to stress. A stressor can be a biological agent, environmental condition or event (Llyod, King, & Chenoweth, 2002; ILO, 2016).

However, in psychology stress is simply defined as mental pressure and tension (Shahsavarani, Abadi & Kalkhoran, 2015). Lazarus (1966) defined stress as a feeling experienced when a person perceives that demands exceed their resources and capacities (as cited in Ganster & Rosen, 2013). Similarly, Robbins and Coulter (2012) stated that, stress as an adverse reaction of people as a result of extraordinary demands, constraints or opportunities.

However, stress reactions are based on one's perception of an event or situation. If one perceives a situation negatively, he/she is likely to feel '*distressed*' (Robbins & Judge, 2013). *Distress* is a more dangerous form of stress which leads to biological, psychological and social problems and could create even more serious damages to humans. Although stress is discussed in a negative context, it is not always bad. It can be positive; especially if a person perceives a situation in a positive manner, stress might lead to potential gains. Scholars named it as '*eustress*' (Ismail *et al*, 2015). For instance, a functional level of stress might allow an employee to perform at his or her optimum level in critical times.

Various determinants of stress have been identified widely in many sociological and psychological contexts. Robbins and Judge (2013) classified potential sources of stress into three categories: (i) environmental; (ii) organizational and (iii) personal. Researchers identified that personal factors such as personality, age, health where as the psychological factors play a sound role in explaining the stress (Gottholmseder *et al*, 2009). Similarly,

researchers reported environmental factors such as poor air, noise, climate and economic factors as important stressors which drive the stress level of an individual.

Further, Robbins and Coulter (2012) identified five organizational stressors as: (i) task demands; (ii) role demands; (iii) interpersonal demands; (iv) organization structure; and (v) organizational leadership. These factors manifest resulting in low job performance, low morale, hinder job satisfaction and commitment of employees and ultimately impact on organizational effectiveness (Tiyce, Hing & Cairncro, 2013; Ismail *et al*, 2015).

Though, in general, there is no univesally accepted model for explaining the determinants of stress, different scholars identified different causal factors in their studies (Gottholmseder *et al*, 2009). Some scholars such as Hennessy and Wiesenthal (1999); Gottholmseder *et al*, (2009) have emphatically revealed that stress can arise as a result of road traffic congestion as well. As found, the spatial separation of residence and work locations necessitates daily travel, which influence on the stress level of employees.

Road Traffic Congestion and Stress at Work

Traffic congestion has become a burning issue for many countries across the globe. Similarly, this has been a major concern in present-day Sri Lanka. This has gravely affected day to day activities and lifestyle of residents and commuters as well. Generally, the term '*traffic congestion*' is used when many vehicles are stuck in one place and there is slow or no movements on roads. Traffic congestion is also termed as '*traffic jam*' by a few scholars. The term '*congestion*' is frequently used in the road traffic contexts and it implies as '*overcrowding or overburdening*' (ECLAC, 2004). It is usually understood as a situation where a large number of vehicles moving in a slow and irregular manner. According to Thomson and Bull (2001) traffic congestion is a situation where introducing of an additional vehicle into traffic flow increases the journey time of others. Similarly, Kumarage (2004) defined traffic congestion as a situation where an excess number of vehicles tiring to use existing road facilities than it can handle. In other terms, it is caused as a result of imbalance between the demand for and supply of road space. Generally, demand for road spaces increases as a result of the excessive number of vehicles, as technological advancements, and uplifting the level of income stimulate people to uplift their living standards, and some others try to maintain a higher status. Thus, today many individuals try to own and use their own vehicles instead of public transportation (ECLAC, 2004; Kumarage, 2004).

Researchers have emphasized that traffic congestion impact both mental and physical health of road users. Hennessy and Wiesenthal (1997) found that road users experience a higher degree of stress, frustration, irritation and negative mood in tight in traffic congestion situations, because they would be facing a problem like time waste when they spent more hours in a traffic jam. They might be delayed from reaching their destinations such as the workplace. Further, this might lead them towards a higher level of anger and sometimes they might demonstrate aggressive driving behaviors on roads (Hennessy & Wiesenthal, 1999) because they are trying to get through the congested roads faster than others (Lomendra *et al*, 2018). This might end up with reduced concentration (Matthews, Dorn & Glendon, 1991) and cause accidents as well (Hennessy & Wiesenthal, 1997). Furthermore, it is argued that in the long-run this situation might lead to physical impacts such as; increased arousal, heart rate, and blood pressure (Morris & Hirsch, 2017). Similarly, too much time spending on travelling makes people less physically active in their workplace (Urhonen, Lie & Aamodt, 2016).

Nobody likes sitting in traffic, thus, today traffic congestion becomes one of the biggest complains received by organizations from employees. It affects employee arrival and work schedules and causes disruptions in their effectiveness. An overwhelming body of literature

has depicted that traffic congestion significantly contributes to a high level of stress at work. Hennessy and Wiesenthal (1999) found that traffic congestion has a particularly strong impact on the level of stress among commuters. Similarly, they have reported that, traffic congestion can affect the psychological state of an individual and he or she might experience a higher level of stress in high congestion areas than in low congestion areas. Traffic congestion consumes time and it leads individual to spend more time on commuting.

Gottholmseder *et al.*, (2009) reported that spending more time commuting is positively associated with feeling stress. Since the traffic congestion is an unpredictable and person does not have control over it, that also leads to stress and frustration (Lachmann *et al.*, 2017). Furthermore, scholars have argued that this would negatively affect physical and mental health (Hansson *et al.*, 2011) and this might lead lower life satisfaction among individuals (Stutzer & Frey, 2007). This stressful situation leads to many negative consequences for employees; including getting tired before they start the work, loss of concentration in the morning, occasionally getting angry (Assiseh *et al.*, 2015).

Therefore, building on the empirical evidence and theoretical explanations discussed above, the following two hypotheses were advanced in the current study to be tested using primary data.

- **H1_a:** Road traffic congestion significantly correlates with the employees' stress at work.
- **H1_b:** Road traffic congestion significantly impact on the employees' stress at work.

Accordingly, the hypothesized relationship among the constructs and the conceptual framework of the study is shown in figure 01.

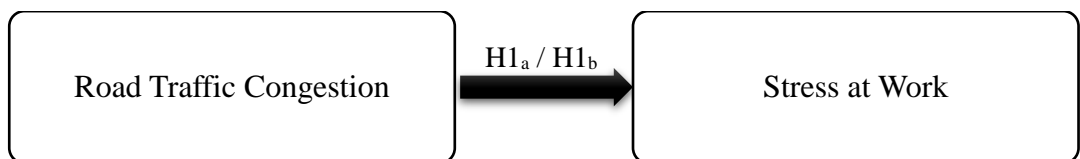


Figure 01: Conceptual Framework

Source: Authors (2020)

Methodology

Participants and Procedures

This study was carried out as a cross sectional field study, predominantly applying the hypothetico-deductive approach, in which the researchers' interference on the study sample was minimum. The population of the current study comprises the employees who experience traffic congestion on roads in the metropolitan areas in Colombo. Therefore, the unit of analysis is at the individual level. As the total number of observations in the population is unknown, convenience sampling was applied to select the study sample (Saunders *et al.*, 2011).

According to Hair *et al.* (2010), the general rule is to have a minimum of 5 observations per item (5:1), where the acceptable sample size would have 10 observations per item (10:1). For a good sample, it should be at least $50 + 10X$; where X is the number of items in the measurement scales, in total (Gaskin, 2010). Hence, in the current study, sample size would be $[50 + 10 \times 34]$ 390 observations. However, exceeding the required number of observations (390), 420 responses were received.

The survey questionnaire was adopted from Roadway Congestion Index (RCI) by the Texas Transportation Institute (2007), User Satisfaction Index (USI) by Metropolitan Washington Council of Governments (1996), and Hennessy & Wiesensthal (1996) which will be discussed later in this paper. It was administered to the respondents directly in on-line mode, as a google form. They were given an assurance that the results would be reported in aggregate to ensure their anonymity. Moreover, one open-ended question was given at the end of the questionnaire to record other comments relating to traffic congestion and stress of the respondents at work. The collected primary data were analyzed with the aid of Statistical Package for Social Sciences (SPSS) employing descriptive statistics, correlation, regression and the residual analysis for model fitness.

Measures

Traffic congestion

The construct 'experience in traffic congestion' was assessed using the adopted scales taken from Roadway Congestion Index (RCI) by Texas Transportation Institute (2007) and User Satisfaction Index (USI) by Metropolitan Washington Council of Governments (1996). Twenty two (22) items were used to measure the construct which was anchored on a five-point Likert scale as in the original scale. Experience in traffic congestion was operationalized through five dimensions; awareness of traffic congestion, readiness for traffic congestion, negative psychological consequences, subjective interpretation of the experience, and coping skills. Sample items include: *'I believe that the time I stuck in traffic congestion is a waste'* (subjective interpretation of the experience); *'I make productive use of the time I spend in traffic congestion [reading a book or newspaper, replying to emails, listening to music, watching a video...]'* (coping skills).

Stress at work

Adopting the measurement scale developed by Hennessy & Wiesensthal (1996) stress at work was assessed through three dimensions; operational pressure, deterioration of psychological energy and the opportunities to relax. The coefficient alpha for this scale was 0.789 in the study of Hennessy & Wiesensthal (1996), and they have also suggested that the scale be used in similar studies in the future. Respondents rated their level of agreement for the items on a five-point Likert scale anchored at 1 = strongly disagree and 5 = strongly agree. Sample items included: *'I feel uncomfortable for few hours at work when I face the traffic congestion in the morning'* (operational pressure); *'I help my peers at work to relax from their tension arises due to traffic congestion on roads'* (opportunities to relax).

Analysis and Results

Out of 780 questionnaires distributed, 445 respondents returned the filled questionnaires. However, out of those, 25 responses were discarded. Only 420 fully completed responses were entered into SPSS, and check for missing values and outliers. The effective rate of response after discarding ineligible responses from the sample (Saunders, Lewis & Thornhill, 2011) was 53.84%. Hence, the final sample of the current study consisted of 420 observations. Composition of the sample is depicted in table 01.

Table 01: Composition of the sample [N=420]

Gender	Male	214	51.0%
	Female	206	49.0%
Civil status	Married	113	26.9%

	Single	307	73.1%
Age group	Below 25 Years	136	32.4%
	Between 25 - 35 Years	240	57.1%
	Between 36 - 45 Years	37	8.8%
	Between 46 - 55 Years	07	1.7%
	Above 55 Years	00	0.0%
Travelling frequency	Daily	373	88.8%
	Weekly	42	10.0%
	Monthly	05	1.2%
Distance to the workplace from residence place	Less than 5 KM	44	10.5%
	Between 5 KM - 10 KM	75	17.9%
	Between 11 KM - 15 KM	98	23.3%
	Between 16 KM - 20 KM	68	16.2%
	More than 20 KM	135	32.1%

Source: Analyzed data, 2020

To ensure the reliability of measurement scales, internal consistency statistics were used. As recommended by Nunnally (1978) and Lu *et al.*, (2007) construct reliability and the dimension reliability were assessed using the Cronbach's Alpha coefficient. As shown in table 02, Cronbach's Alpha values of all the variables are greater than 0.7 indicating that the multi item scale is reliable, and all the items have played a significant role in conceptualizing the respective constructs.

Table 02: Reliability Statistics

Construct/s	Dimension/s	No. of Items	Cronbach's Alpha
Stress at work [Cronbach's Alpha = 0.802]	Operational pressure	03	0.817
	Deterioration of psychological energy	04	0.779
	Opportunities to relax	05	0.811
Traffic congestion [Cronbach's Alpha = 0.801]	Awareness of traffic congestion	02	0.910
	Readiness for traffic congestion	04	0.712
	Negative psychological consequences	07	0.781
	Subjective interpretation of the experience	05	0.703
	Coping skills	04	0.903

Source: Analyzed data, 2020

Sampling adequacy and the sphericity were ensured through the Kaiser-Meyer-Olkin (KMO) Measure and the Bartlett's test respectively. As the KMO coefficient is greater than 0.7 for both variables, and the Sig. value is less than 0.05, statistically it is claimed that the study sample of 420 observations is adequate enough to proceed with EFA. Moreover, results indicate that sufficient correlations exist among the variables to proceed, and in this study therefore, sampling adequacy is significant. Since the KMO measure of sampling adequacy meets the minimum criteria, there is no need to examine the Anti-Image Correlation Matrix. Results of the KMO and Bartlett's test are given in table 03.

Table 03: Results of the KMO and Bartlett's test

		Stress at work	Traffic congestion
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.852	.846
Bartlett's Test of Sphericity	Approx. Chi-Square	4058.788	3175.575
	df	270	43
	Sig.	.000	.000

Source: Analyzed data, 2020

According to the validity statistics given in table 04, cumulative percentage of the Extraction Sums of Squared Loadings (*ESSL Cum%*) of two constructs are greater than 50%, and the item Factor Loading (*FL*) values are above the threshold limit of 0.5 as recommended by Hair *et al.*, (2010). So that, statistically, the construct validity is ensured.

Table 04: Validity Statistics [Exploratory Factor Analysis (EFA)]

Construct	Dimension	No. of items	Lowest FL	Highest FL	ESSL Cum %
Stress at work	Operational pressure	03	0.533	0.789	59.35
	Deterioration of psychological energy	04	0.611	0.812	
	Opportunities to relax	05	0.702	0.910	
Traffic congestion	Awareness of traffic congestion	02	0.599	0.688	67.81
	Readiness for traffic congestion	04	0.615	0.819	
	Negative psychological consequences	07	0.746	0.916	
	Subjective interpretation of the experience	05	0.499	0.701	
	Coping skills	04	0.484	0.679	

Note: (1) FL - Factor Loading; (2) ESSL - Extraction Sums of Squared Loadings

Source: Analyzed data, 2020

As mentioned by Hair *et al.*, (2010) in the re-construction of variables, it is essential to report in EFA, whether the items are deviated from its theoretically defined location with factor loading values and cross loading issues if any. As depicted in table 05, all the items are loaded into their theoretically pre-defined locations. Further, no any cross loading issues were found.

Table 05: Component Matrix

Variable: Stress at Work [DV]				
Items	Factor 01	Factor 02	Factor 03	
Often I am late in the morning to start my duties at work, due to the traffic congestion	0.533			
I feel uncomfortable for few hours at work when I face the traffic congestion in the morning	0.789			
I am not fresh & energetic at work when I face the traffic congestion in the morning	0.711			
I feel disappointed during the whole day at work when I face the traffic congestion in the morning		0.611		
I hate it when I think about the evening traffic congestion on roads		0.789		
I hate it when I am asked to go out from my workplace during the peak time of traffic congestion		0.697		
For me, it is difficult to focus on my duty/work when I have to face traffic congestion in the morning		0.812		
Often I talk with my peers and share my experience about traffic congestion which I had to face			.791	
I have ways and means to relax at work even though I have to face the traffic congestion daily			.699	
I help my peers at work to relax from their tension arisen due to traffic congestion on roads			.823	
I seriously considered the traffic congestion when I choose this job			.702	
I seriously considered the traffic congestion when I choose the current residence place			.910	

Note: (1) **Factor 01** - Operational pressure; (2) **Factor 02** - Deterioration of psychological energy; (3) **Factor 03** - Opportunities to relax

Variable: Road Traffic Congestion [IV]					
Items	Factor 01	Factor 02	Factor 03	Factor 04	Factor 05

I know very little about the road traffic congestion of the area in which I work	0.599
I am aware about the locations and time of traffic congestion on roads	0.688
I leave my home (residence place) too early due to the traffic congestion which I have to face everyday morning	0.821
I use to leave my workplace too early due to the evening traffic congestion on roads	0.615
I use to leave my workplace too late to avoid the evening traffic congestion on roads	0.819
When travelling, I have a backup plan to avoid the traffic congestion on roads, so that to enjoy a smooth travel	0.767
Getting stuck in traffic doesn't bother me too much	0.749
I feel angry with the Police when I have to get stuck in traffic congestion on roads	0.916
I feel angry with the government when I have to get stuck in traffic congestion on roads	0.746
I feel angry with other drivers and passengers when I have to get stuck in traffic congestion on roads	0.801
I feel stressed when stuck in road traffic congestion	0.812
I feel frustrated when stuck in road traffic congestion	0.903
I'm often in a hurry to be somewhere else because of road traffic congestion	0.899
I believe that the time I am stuck in traffic congestion is a waste	0.701
Even though I'm the only one person, I believe that my actions can make a serious impact on the road traffic congestion	0.689

I believe that road traffic congestion is inevitable in metropolitan areas in Colombo	0.700
I believe that we should be able to adopt to the road traffic congestion in Colombo, at any cost	0.690
If the line is moving, waiting in a traffic congestion is OK for me	0.499
I make productive use of the time I spend in traffic congestion (reading a book or newspaper, replying to emails, listening to music, watching a video...)	0.484
I prefer to use public transportation due to the traffic congestion on roads	0.671
I prefer driving my own vehicle due to the traffic congestion on roads	0.679
I sleep during the time stuck in traffic congestion	0.657

Note: (1) **Factor 01** - Awareness of traffic congestion; (2) **Factor 02** - Readiness for traffic congestion; (03) **Factor 03** - Negative psychological consequences; (4) **Factor 04** - Subjective interpretation of the experience in traffic congestion; (5) **Factor 05** - Coping skills

Source: Analyzed data, 2020

There are two basic measures of descriptive statistics widely used in social science research; mean and the standard deviation. If the value of standard deviation falls between -2 and +2, the variability of the construct is said to be accepted for further statistical analyses (Lu *et al*, 2007). Statistically, skewness measures the relative size of the two tails of the distribution, whereas the kurtosis is a measure of the combined size of two tails; measuring the extent of probability in the tails. The value is often compared to the kurtosis of the normal distribution, which is equal to 3. Mean, standard deviation, skewness and kurtosis values of the constructs in the current research model are given in table 06.

Table 06: Descriptive Statistics

Construct	N	Mean	SD	Skewness	Kurtosis
Stress at work	420	3.1697	0.33636	0.432	0.294
Traffic congestion	420	3.4541	0.27580	0.163	-0.544

Source: Analyzed data, 2020

Test for Normality

According to the results of One-Sample Kolmogorov-Smirnov Test for Normality depicted in table 07, the Asymp. Sig. values of the construct 'traffic congestion' is 0.200, and the 'stress at work' is 0.67. In accordance with the basic decision making rule of the normality test, as the Asymp. Sig. values obtained for two constructs are greater than 0.05, it could be concluded that the data series of traffic congestion and stress at work are normally distributed.

Table 07: One-Sample Kolmogorov-Smirnov Test for Normality

		Traffic congestion	Stress at work
N		420	
Normal Parameters ^{a,b}	Mean	3.4541	3.1697
	Std. Deviation	0.2758	0.3363
Most Extreme Differences	Absolute	.057	.095
	Positive	.057	.095
	Negative	-.049	-.059
Test Statistic		.057	.095
Asymp. Sig. (2-tailed)		.200^{c,d}	.067^c

Note: (a) Test distribution is Normal; (b) Calculated from data; (c) Lilliefors Significance Correction; (d) Lower bound of the true significance

Source: Analyzed data, 2020

Test for Linearity

According to the ANOVA output given in table 08, the value sig. of deviation from linearity is 0.145 which is greater than 0.05. Thus, it could be concluded that there is a linear relationship between the constructs of negative experience in traffic congestion and the employees' stress at work.

Table 08: ANOVA Test for Linearity

			Sum of Squares	df	Mean Square	F	Sig.
Stress at work * Traffic congestion	Between Groups	(Combined)	4.245	25	.170	1.763	.029
		Linearity	1.066	1	1.066	11.077	.001
		Deviation from Linearity	3.178	24	.132	1.375	.145
	Within Groups		8.088	84	.096		
	Total		12.332	419			

Source: Analyzed data, 2020

Correlation Analysis

Building on the linear relationship found among the negative experience in traffic congestion and employees' stress at work, Pearson Correlation Coefficient was used to assess the strength of association among the said two constructs. Further, Sig. (2-tailed) test was applied to test the significance of the correlation coefficient as the advanced hypothesis was non-directional. Results of the correlation analysis are given in table 09.

Table 09: Correlation Matrix

		Stress at work	Traffic congestion
Stress at work	Pearson Correlation	1	.294**
	Sig. (2-tailed)		.002
	Observations (N)	420	420
Traffic congestion	Pearson Correlation	.294**	1
	Sig. (2-tailed)	.002	
	Observations (N)	420	420

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Analyzed data, 2020

As shown in table 09, a moderate positive correlation is found between the experience in traffic congestion and stress at work ($r=0.294$) which is statistically significant as Sig. 2-tailed (0.002) is less than the level of significance (0.01). Hence, $H1_a$ is accepted testifying that the experience in traffic congestion is significantly correlated with the stress at work.

Regression Analysis

Linear regression analysis was done to test the hypothesis ($H1_b$) advanced for the effect of traffic congestion on stress at work. Results of the rest are given in table 10 and 11.

Table 10: Regression Statistics

Multiple R	0.294 ^a
R Square	0.086 (8.6%)
Adjusted R Square	0.078
Standard Error	0.32298
Observations (N)	420
F	10.224
Sig.	.002 ^b
Regression	Linear
Method	Enter

Note: (a) Dependent Variable: Stress at work; (b) Predictors: (Constant), Traffic congestion

Source: Analyzed data, 2020

According to the results depicted in table 10, **8.6% ($R^2 = 0.086$)** of the variation of employees' stress at work could be significantly (Sig. = 0.02 which is less than 0.05) explained by the independent construct in the research model; the experience in traffic congestion. Further, as given in table 11, the marginal contribution of traffic congestion (0.359) in determining the effect on stress at work is to be considered statistically significant (Sig. = 0.02) in the regression equation.

Thus, according to the regression results, H1₀ is accepted statistically claiming that, there is a significant impact of experience in the traffic congestion on employees' stress at work.

Table 11: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.931	.389	-	4.968	.000
	Traffic congestion	.359^a	.112	.294	3.197	.002

Note: (a) Dependent Variable: Stress at work

Source: Analyzed data, 2020

Residual Analysis for Model Fitness

Moreover, to check whether the set regression model is fitted enough in predicting the future scenarios of the similar effect, residual analysis for model fitness was done. Results of the residual analysis are depicted in figure 02, figure 03 and 04.

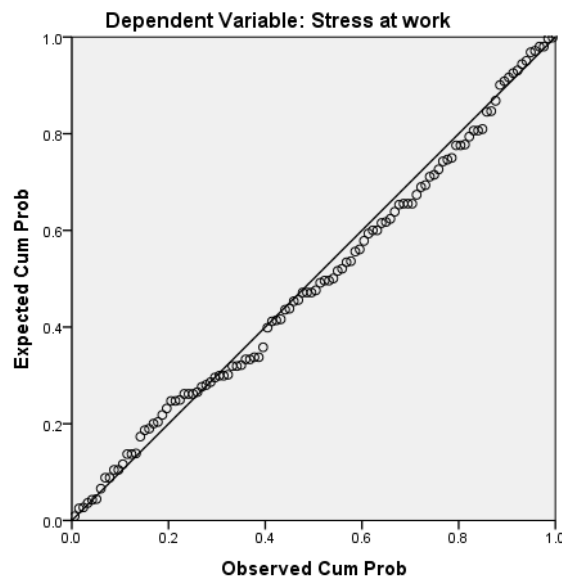


Figure 02: Normal P-P Plot of Standardized Residuals

Source: Analyzed data, 2020

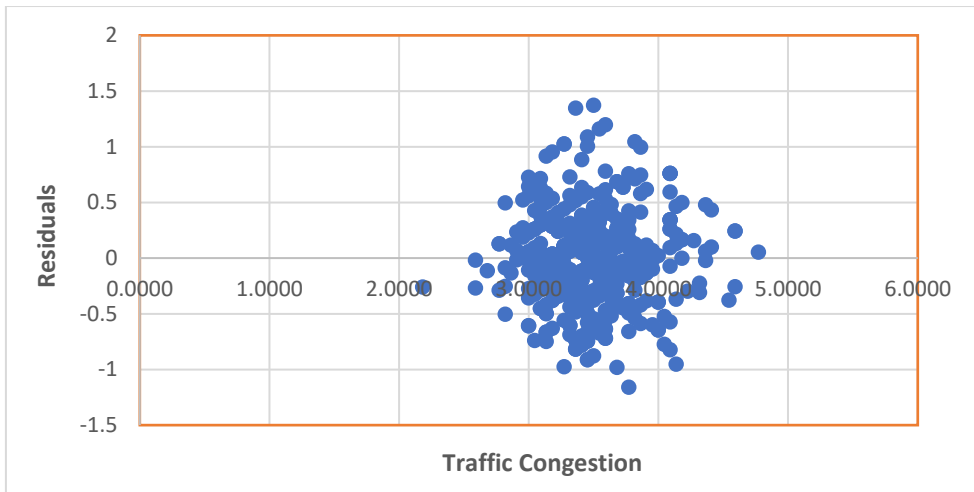


Figure 03: Scatterplot of Standardized Residuals

Source: Analyzed data, 2020

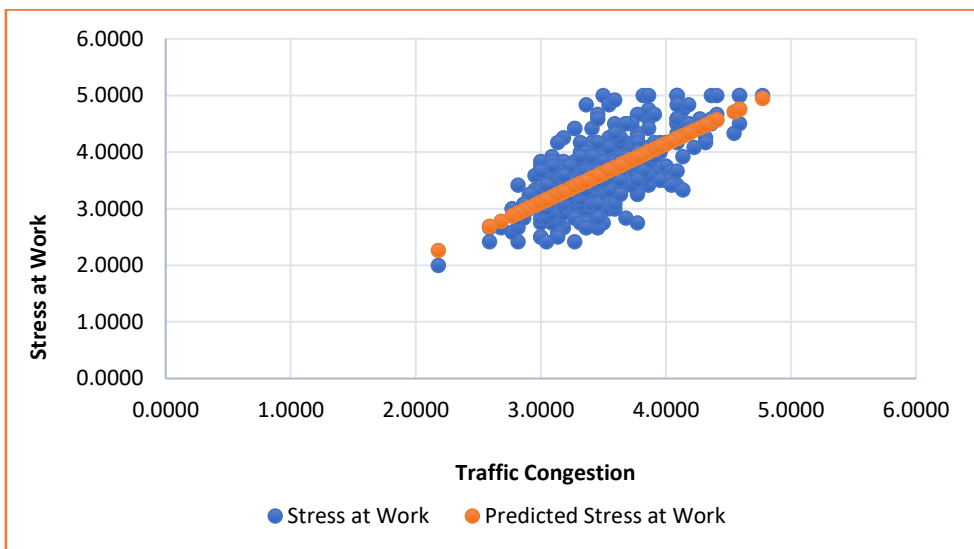


Figure 04: Line-Fit Plot for Predicted Values

Source: Analyzed data, 2020

The residuals are distributed around the forty five degree diagonal line of the plot, and also there is no pattern of distribution of those residuals as they are scattered. Moreover, as given in figure 04, the predicted level of stress at work as a result of the experience in traffic congestion is also positively correlated with each other, indicating an adequate fitness of the regression model in predicting the effect of the same in future scenarios.

Discussion of Findings

In the current study, a significant effect is found from the road traffic congestion on employees' stress at work. Irrespective of the contextual differences, this result is in-line with, and supported by many of the previous research studies. As stated by Hennessy and Wiesenthal (1999), traffic congestion has a strong impact on the level of stress among commuters. Similarly, they have reported that, traffic congestion can affect the psychological state of employees, and they might experience a higher level of stress in highly congested areas, which in turn will result in increased level of stress at work. Moreover, the negative experience in traffic congestion leads to many negative consequences for employees such as: getting tired before they start the work; loss of concentration at work; occasionally getting angry; more mistakes; more industrial accidents and ultimately poor job performance (Assiseh *et al*, 2015). Furthermore, Gottholmseder *et al.*, (2009) found that spending more time commuting is positively associated with feeling stressed at work, which in line with the current findings. Since the road traffic congestion is unpredictable and employees do not have any control, it creates stress and frustration for them at work (Lachmann *et al*, 2017).

Conclusion

Having considered its major findings, the current study concludes declaring that, the experience in traffic congestion has to be considered a significant predictor / determinant of employees' stress at work. Further, it is concluded that, stress at work is not a mere outcome arisen due to the workplace itself, but as a combined effect of both internal and external determinants. Hence, in assessing the stress at work, employees' experience of road traffic congestion cannot be ignored. Especially, if the workplace is located in a metropolitan area and/or employees have to travel across such areas frequently, organizations may consider the discovered dimensions, and the filtered items reported in the current study in assessing their stress at work. Moreover, the distinction between work stress and the stress at work is emphasized and validated further in the current study.

Implications

Implications of the current study basically fall into two categories; contribution to practice and the contribution to the body of knowledge. It is recommended for individual employees who are risked at the frequent road traffic congestion to mindfully develop the awareness of & the readiness for traffic congestion, and the appropriate coping skills. Further, it is recommended for employers to provide an adequate amount of opportunities for such employees to relax at work. Practically speaking, findings of the current study might be useful for Human Resource Management practitioners for initiating work-life balancing initiatives such as flex-work arrangements, designing location free work and in job crafting as an Organizational Development (OD) initiative as well.

On the other hand, building on Hennessy & Wiesenthal (1996), re-construction of the variable of 'employees' stress at work' as a *multi-dimensional construct* discovering the untapped part of it arises due to the experience of road traffic congestion could be considered a major contribution to the body of knowledge. Further, based on the Roadway Congestion Index (RCI) of Texas Transportation Institute (2007) and the User Satisfaction Index (USI) of Metropolitan Washington Council of Governments (1996), re-construction of the variable 'road traffic congestion' is also considered a major contribution of this study. Hence, the researchers of this study would suggest future researchers to use and validate the item scales refined in the current study which is depicted in table 05.

Directions for Future Research

Despite the coherent limitations, the current study has achieved its pre-set objectives, and has opened new avenues for further discussions of stress at work instead of the traditional theme of work stress. However, this study was limited to the metropolitan areas in Colombo, hence, it is recommended for future researchers in the same domain to get this re-constructed scale validated by considering a bigger sample drawn from the metropolitan areas of other districts as well; especially, Kurunegala, Kandy, Matara and Anuradhapura which are rated as 'road traffic red' areas in Sri Lanka. As an initial research effort, in the current study, only the direct impact of traffic congestion on employees' stress at work was assessed. Thus, broadening the scope, it is suggested to consider possible mediators and moderators into the research model in future studies. Moreover, the behavior of both variables of the current study is time related. Therefore, it is better to consider time related factors (or control variables) in future research studies to eliminate the time based predispositions in conclusions. Finally, the need of more qualitative studies is emphasized for modifying the extant stress theories in up-to-date literature.

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Nexus between Work Stress and Employee Turnover Intention: Study of Non-Managerial Female Employees in Apparel Industry of Sri Lanka

Lakshani, K. M. G. S.¹ and Weerasinghe, T. D.²

Current study examines the nexus between work stress and turnover intention of non-managerial female employees in the apparel industry of Sri Lanka to bridge the lacuna in the up-to-date body of knowledge with more precise empirical evidence from the context. Five companies representing the whole industry, were selected from the Katunayake Free Trade Zone, Sri Lanka from which the primary data was collected via a questionnaire survey. A standard questionnaire was distributed to a sample of 320 non-managerial female employees. Random sampling technique was used to select a representative sample. Correlation, independent sample t-test and One-way ANOVA were applied to analyse the collected data and to test the advanced hypotheses. In the analysis demographic differences do not come out as significant in predicting for turnover intention, except the educational level and level of work experience. However, it is found that, non-managerial females in the apparel industry experiencing higher job demands and negative work relationships are more likely to leave. Further, a greater extent of work control, clarity of job role, management support & colleagues support will increase the chances of employees staying. Thus, non-managerial females who are open to higher work stress are at a higher risk of leaving than other employees. Findings revealed that less experienced and less educated employees are more likely to leave than other females. Moreover, practical and theoretical implications are emphasized in the present study.

Keywords: *Apparel Industry, Turnover Intention, Work Stress*

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¹ Chief Magistrate Court, Colombo 12, Sri Lanka (*shakee.slk@gmail.com*)

² Department of Human Resource Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka (*tdmdananjaya@gmail.com / dananjaya@kln.ac.lk*)

Introduction

In up-to-date literature, employee turnover and turnover intention have been recognized as important concerns of Human Resource Management (HRM) (Shuck *et al.*, 2014) as both can negatively affect the organizational performance (Egan *et al.*, 2004 as cited in Ju & Li, 2019). Similarly, on the other hand, work stress has become a significant and serious problem in the modern world of work. It can affect employees' health and wellbeing, causing not only physiological, but also psychological, emotional and even spiritual disorders. Further, work/job stress can inversely effect employees' work efficiency, performance, service quality, and boost turnover rates; thus, increasing the cost for both employee and organization (Villanueva & Djurkovich, 2009; O'Neill & Davis, 2009).

Among those costs of stress, major negative outcome is employee turnover intention (Sullivan & Bhagat as cited in Liyanage, *et al.*, 2014). Meanwhile, there are several researchers (such as Noor & Maad, 2008; Sherazet *et al.* 2014; Mxenge *et al.*, 2014) who have identified that there is a significant impact of work stress on turnover intention of employees; especially female workers. Researchers (such as Muhammad *et al.*, cited in Khan *et al.* 2014; Kaur *et al.*, 2013) have suggested that if organizations are willing to retain their employees, they must reduce the gravity of work stressors which may cause the work stress ultimately leading towards the employee turnover intention.

On the other hand, development policies laid out by the government of Sri Lanka continuously fostered the growth of the apparel industry. According to the Index of Industrial Production (IIP), apparel production has increased by 4.7% in 2017 (Central Bank of Sri Lanka, 2017). In addition, by December 2017 total export revenue from this sector grew by 19.4% (Central Bank of Sri Lanka, 2017).

Sri Lankan apparel industry mainly attracts the youth; especially young females (Liyanage, *et al.*, 2014). It creates many employment opportunities, especially in non-managerial and non-technical jobs. Despite these entire favourable facts associated with the apparel industry, at present it faces a high level of employee turnover. (Khatri *et al.*, as cited in Liyanage, *et al.*, 2014). Hence, the apparel industry faces a major challenge of reducing the turnover among its workers.

Table 01: Annual turnover rates of five apparel manufacturing firms

Year	Company 1	Company 2	Company 3	Company 4	Company 5
2017	6.2%	5.1%	6.1%	5.5%	6.7%
2018	6.5%	6.0%	5.9%	6.2%	6.9%

Source: Company Records, 2018 and 2019

According to the figures depict in Table 01, employee turnover and work/job stress in the context of the apparel industry is a notable research direction as per the empirical evidence and the explanations found in the extant literature. It highlights that Sri Lanka is also a notable context demanding such contemporary studies further.

Research Problem

As mentioned above, one main challenge of current businesses is employee turnover of organisations. Tariq and Riaz (2013) cited from Derek (2006) has stated that employee turnover positively leads towards inefficiency in organisations. Hence, employee turnover is a huge issue for developed nations as well for developing nations that needs to be addressed properly in the business context.

DailyFT (2018) highlighted that apparel sector has contributed 40% of all exports of Sri Lanka in 2017. In addition, the article highlighted that over 300,000 employees are directly working in this sector and majority of them are women. MAS Fabric Park (2018) in their study mentioned that nearly 15% of the workforce in Sri Lanka work in the apparel sector, and out of them 85% represent females. However, in recent years it has been recognized that labour turnover in the apparel industry is increasing rapidly especially among women workers. Madurawala (2017) explained that labour shortage is excessive in the apparel industry due to low social recognition and bad reputation for the jobs. Further, this report highlighted that female unemployment rate was 7.6% in 2015, while male unemployment rate was 3%. The labour Demand Survey 2017 conducted by the Department of Census and Statistics (2018) revealed that there is a very high demand for sewing machine operators, which is nearly 40% of the total demand. It is the highest demanded occupation, while the second largest demand for other manufacturing labour is accounted only for 14.4% (Rajapaksha, 2018).

Even though, there are job opportunities in the sector, women refuse to join the industry, or leave within a shorter period of time after joining the industry. Turnover intention and turnover has become a major burning issue in the apparel industry of Sri Lanka as stated. Many turnover studies have focused on causes and effects in many other industries. To date, comprehensive and substantial studies have not been conducted to determine the direct impact of work stress on turnover intention of non-managerial female employee in the apparel industry of Sri Lanka, though a few scholars and organizations have conducted surveys relating to women's problems at the workplace. This lacuna of research could be attributed to the fact that, even though employee turnover causes financial losses and social issues, the problem is often ignored because the issues are indirect and hidden (Rajapaksha, 2019). Then, this study focuses on identifying how job stress impacts on the turnover intention among non-managerial female employees in the apparel industry in Sri Lanka. Further, a shortage of up-to-date empirical evidence to validate the said association was found in the extant literature. Hence, having identified the afore-mentioned empirical gap, knowledge gap and the contextual gap, the below mentioned problem is raised in the current study:

What is the nexus between work stress and employee turnover intention of non-managerial female employees in the apparel industry of Sri Lanka?

Objectives of the Study

Main objective of this research is to identify the significant determinants of turnover intention of non-managerial female employees in the apparel industry of Sri Lanka. In addition to that, the following specific objectives were established to be achieved in the current study.

- To assess the nexus between dimensions of work stress and employee turnover intention of non-managerial female employees in the apparel industry of Sri Lanka.
- To assess the nexus between job stress and employee turnover intention of non-managerial female employees in the apparel industry of Sri Lanka.
- To assess the association of demographic variables and employee turnover intention of non-managerial female employees in the apparel industry of Sri Lanka.

Significance of the Study

Findings of this study are very crucial in understanding the impact of work stress on employee turnover intention of non-managerial female employees in the apparel industry. Since different employees have different perspectives, the management (both top and middle management) can use this research insights to control the stress for reducing employee turnover, which will ultimately enhance performance, efficiency and effectiveness of the organisational processes.

Even though employee turnover and its relationship with stress of employee have ever researched, their importance always increases, as the competitiveness of labour market grow in leaps and bounds. Therefore, it is essential and advantageous to discuss an ever valid research area, which will add new literature in novel perspectives that are compatible with changing business and academic contexts. It will assist future researchers to get to know about the impact of work stress on employee turnover intention of non-managerial females in the apparel industry, Sri Lanka.

Literature Review

Turnover is an ever-critical theme, discussed by many researchers and scholars, and ultimately exhibits alike denotation; exit of the employees from business organisations. Still there are numerous categories and meanings of employee turnover. Generally, it is identified that turnover occurs when the employer-employee relationship stops. In organisational perspective, turnover is the termination of the intra-organisational career path of an employee that is consisted with a string of changes of the job starting-way in and ending-way out (NSDC, 2010). According to Arokiasamy (2013) employee turnover is denoted as a condition, whereby employees willingly depart from the organisation due to diverse reasons and by this means it affects the organisation in a negative manner. Nel *et al.*, (2001) stated a general definition for employee turnover mentioning it as the replacement of employees all over the labour market, among the business entities, occupations, and jobs and further between status of employment and unemployment. It has been identified in modern literature as job hopping.

Having reviewed all the above-mentioned literature, it is evident that, whatever the form of turnover, its ultimate outcome is to end the prevailing employer-employee relationship. The focus of this research is on the voluntary turnover of employees [*known as turnover intention*], to which various organisational factors could affect such as: job; working schedules; working environment; superiors & peers.

On the other hand, work stress has been widely researched and identified as a predictor of employee turnover intention across various samples and time-scales. However, work stress is relatively a hard concept to define because of its subjectivity and complexity. The fact that work stress has been a topic of interest for researchers of various disciplines including; management, psychology, medicine, and that they proposed their own concepts and methodology, makes the topic even more complex and polygonal (Cummings & Cooper, 1998, cited by Fevre *et al*, 2003).

Term '*stress*' was first introduced by Hans Selye, a Hungarian endocrinologist - known as the '*father of stress*' (Fink, 2009). Fink (2009) noted that some patients with different diseases had some common non-specific symptoms at the beginning of their infection. This observation encouraged her for further research of the body reactions to the stressful stimuli and development of the General Adaptation Syndrome; GAS (Fink, 2009). Hans has introduced the term '*stress*' and has given the first and the most generic definition: stress is the nonspecific response of the body to any demand (Selye, 1976). In his GAS theory, Selye has

identified three stages as: alarm, resistance, and exhaustion. At the first stage; alarm body responds to the stressors with the first signs of changes and the defense processes are activated next (Ivancevich & Matteson, 1980). Later, if the stressor is not disappearing and adaptation is developed, the resistance stage will be reached. Long lasting stress can result in the third stage; exhaustion, and even lead to death (Fink, 2009). This process is recurring; therefore, if new demands are put on the body repeatedly, the alarm stage reoccurs. The consequences of this cyclical experience can vary from sicknesses & fatigue to decreased performance at work, and at other life domains in the long-run (Ivancevic & Matteson, 1980).

Work stress as a well-known problem, nowadays has been researched and reported by several authors. Recent studies reported that work stress is the prominent source of stress among the working adults of USA, which has intensely improved during the last two decades (American Institute of Stress, 2016). Also, from a survey conducted in Canada (2002) found that 38.8% of Canadians between the age of 15 and 75 experience a light degree of stress at work, 25% are relatively stressed, and 5.4% of the respondents were extremely stressed (Statistics Canada, 2002 – updated in September, 2004 as cited in Brun & Lamarche, 2006). Furthermore, the rising interest on this issue could be explained via the critical consequences associated with the work stress for both employees and employers (Watkins, 2003; Brun & Lamarche, 2006). However, to analyze all the aspects of work stress, first it is necessary to understand the nature and recognize the predictors of work stress.

Turnover intention of employees at work has been examined enough by various scholars as a conscious willingness to leave the work place (Griffeth *et al.*, 2000; Ohana and Meyer, 2010; Alniacik *et al.*, 2011; Panatik *et al.*, 2012). According to Tett & Meyer (1993) turnover intention has been described as the final step of the process of withdrawal cognitions; a set of thoughts including thinking of leaving and the intent to search for alternative opportunities. Indeed, the turnover intention is the main source of employee turnover. Hence, Alkandari & Hammad (2009) stated that the employee retention has been shown to be significant to the development and the accomplishment of the organizational targets.

Apparel industry mainly attracts young females (Liyanage *et al.*, 2014). According to the existing information in the apparel industry, the turnover intention of them is higher than the expected level and has become a major threat to the existence of the industry (Rajapaksha, 2017).

Though the nexus between work stress, its dimensions and turnover intention of employees have been investigated enough and well documented across various samples, such findings are found to be inconsistent. Generally speaking, a common agreement was found among many of the scholars (Abbasi & Hollman, 2000; Liyanage *et al.* 2014; Rajapaksha, 2017; Dheerasinghe, 2017) for a strong positive association among work stress and turnover intention of employees in the apparel sector. Similarly, Qureshi *et al.*, (2013) and Mosadeghrad (2013) found a positive relationship between work stress and turnover intention of employees; especially, among non-managerial females. Ohana and Meyer (2010) stated that work demands, work control and clear job roles are significantly correlated with employee turnover intention whereas Panatik *et al.*, (2012) found that relationships at work and changes in work are significantly influential than other organizational and environmental related factors on employee turnover intention. Moreover, Dheerasinghe (2017) mentioned that managerial support and colleague support as two significant predictors of turnover intention of female workers.

Further, Rajapaksha (2017) found that turnover intention significantly varies across various age categories and on the marital/civil statues of employees. Similarly, educational level and the work experience were found to be significant in predicting the turnover intention of

employees especially in the Asian countries (Alniacik et al., 2011; Panatik et al, 2012). However, the association among residence/ place of the employee and turnover intention were found to be not clear and consistent in the extant literature.

Accordingly, building on the empirical evidence and theoretical explanations discussed above, the following hypotheses were advanced in the current study to be tested using primary data.

- **H₁:** There is a significant nexus between work demands and employee turnover intention.
- **H₂:** There is a significant nexus between work control and employee turnover intention.
- **H₃:** There is a significant nexus between managerial support and employee turnover intention.
- **H₄:** There is a significant nexus between colleague support at work and employee turnover intention.
- **H₅:** There is a significant nexus between job role and employee turnover intention.
- **H₆:** There is a significant nexus between relationship at work and employee turnover intention.
- **H₇:** There is a significant nexus between work change and employee turnover intention.
- **H₈:** There is a significant nexus between work stress and employee turnover intention.
- **H₉:** There is a significant nexus between age and employee turnover intention.
- **H₁₀:** There is a significant nexus between residency and employee turnover intention.
- **H₁₁:** There is a significant nexus between marital status and employee turnover intention.
- **H₁₂:** There is a significant nexus between work experience and employee turnover intention.
- **H₁₃:** There is a significant nexus between education level and employee turnover intention.

The hypothesized relationships among the constructs are depicted in Figure 01; conceptual framework of the study.

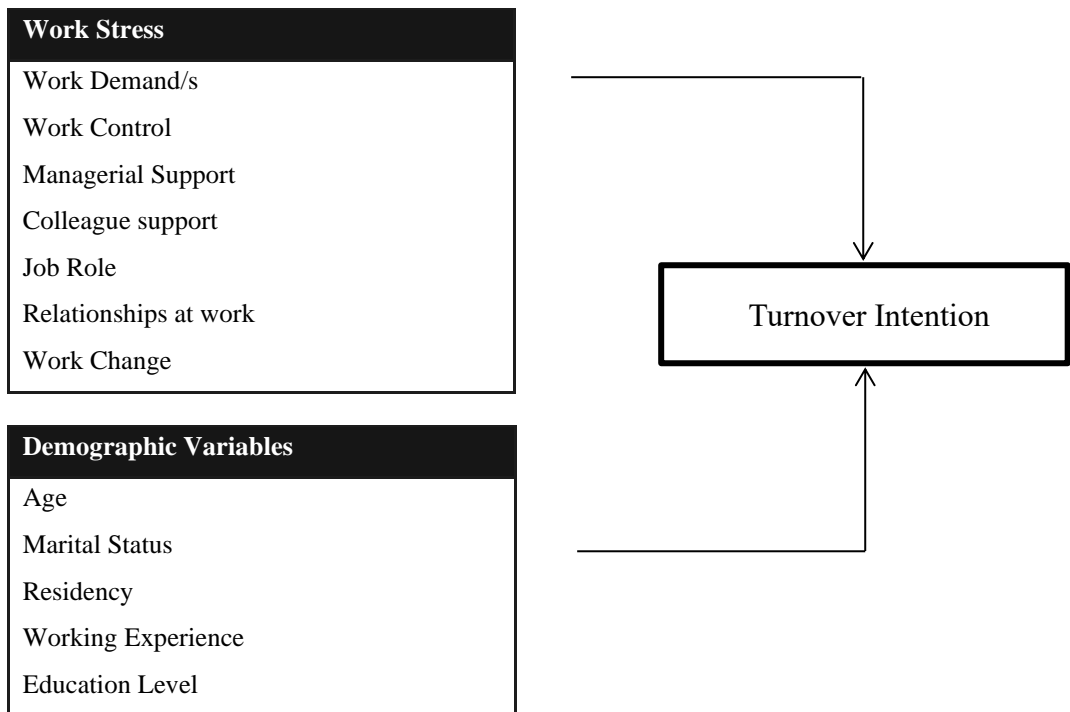


Figure 01: Conceptual Framework of the Study

Source: Authors, 2020

Methodology

Population and the Sample

Selected population for the current study comprises the total number of non- managerial female employees working in five selected garment factories located in the Katunayake Free Trade Zone, Sri Lanka. Hence, for the current study a **known population** is considered which is depicted in Table 02.

There are around 300 – 350 manufacturers of apparels in Sri Lanka. (Industry Capability Report, 2017). More than 65% of garment factories are located in the Katunayake Free Trade Zone because of better infrastructure facilities and close proximity to the Colombo harbour. In the Katunayake Free Trade Zone, there are more than 60,000 non-managerial female workers working in garment factories (Dheerasinghe, 2017). Because of the above reasons Katunayake Free Trade Zone has been identified as the needed, and also the target area.

Table 02: Population

Company	Company 1	Company 2	Company 3	Company 4	Company 5
Population	690	850	700	890	700
Total	3830				

Source: Company Records, 2019

First, researchers visited ten apparel companies located in the Colombo- Katunayake Free Trade Zone. Among those ten factories a sample of five reputed factories were selected judgementally according to the highest turnover rates. The final sample is taken from five companies using systematic random sampling method.

A random group of 350 non-managerial female employees were selected from the population of 3830 using systematic sampling. First, considering the payroll of five companies, a list of female workers were create. Then order-up the list and every 11th person was selected as a participant. Such a participant was chosen since, $3830/350 = 11$.

Measurement Scales of Variables

Turnover Intention

Adopting the measurement scale developed by Abbasi and Hollman (2000) employee turnover intention was assessed as a unidimensional construct. Coefficient alpha for this scale was 0.834 in the original study of Abbasi and Hollman (2000). Respondents rated their level of agreement for the items on a five-point Likert scale anchored at 1 = strongly disagree and 5 = strongly agree. Sample items included: *"I often think about quitting"*; *"It is likely that I will actively look for new job next year"*; *"I will probably look for a new job in the next year"* and *"I often think of changing my job"*.

Work Stress

Work stress was assessed using the measurement scale developed by Cousins et al. (2004) which was the most commonly used scale in literature. This was appraised through six dimensions: demands, control, support, relationships, role and organizational change. The current researchers used 34 items fixed on a five point Likert scale adopted from Cousins *et al.*, (2004) to assess work stress, and it had the average coefficient alpha of 0.91 in the original scale. Sample items include: *"I am pressured to work long hours"* (demands); *"I can decide when to take a break"* (control); *"There is friction or anger between colleagues"* (relationships).

Methods of Data Collection and Data Analysis

Primary data was collected via a questionnaire survey. The survey instrument contains three sections; A, B and C. Section A includes the questions relating to the independent variables, and section B covers the dependent variable. Section C was designed to obtain the demographic information of respondents. Survey questionnaire was administered in the Sinhala medium via an offline survey; printed on paper. Overall response rate of the current study was 91.4%.

Respondents were assured that the results would be reported in aggregate to ensure their anonymity. Moreover, one open ended question was given at the end of the questionnaire to report other comments relating to work stress and turnover intention of the respondents. The collected primary data was analysed with the aid of the Statistical Package for Social Sciences (SPSS) and Excel employing *descriptive statistics, correlation, independent sample t-test and one-way ANOVA*.

Analysis of Data

Reliability and Validity Statistics

To ensure the reliability of measurement scales, internal consistency statistics were used. As recommended by Nunnally (1978) and Lu *et al.*, (2007), both construct reliability and the dimension reliability were assessed using the Cronbach's Alpha coefficient. Cronbach's Alpha values of all the variables [*α of turnover intension* = 0.892 and *α of work stress* = 0.733] are greater than 0.7 indicating that the multi item scale is reliable, and all the items have played a significant role in constructing the respective variable.

Sampling adequacy and the sphericity were ensured through the Kaiser-Meyer-Olkin (KMO) Measure and the Bartlett's test respectively. As the KMO coefficient is greater than 0.7 for both variables, and the Sig. value is less than 0.05, statistically it is claimed that the study sample of 350 observations is adequate enough to proceed with multi-variate analysis. Also, results indicate that sufficient correlations exist among the variables to proceed, and in this study therefore, sampling adequacy is significant.

According to the validity statistics obtained in the current study, cumulative percentage of the Extraction Sums of Squared Loadings (ESSL Cum%) of two constructs are [*turnover intension* = 78.23% and *work stress* = 74.16%] greater than 50%, and the item Factor Loading (FL) values are above the threshold limit of 0.5 for all the items - as recommended by Hair *et al.*, (2010). So that, statistically, the construct validity is ensured. Also, no cross-loading issues were encountered.

Moreover, the primary data set was tested for basic two multivariate assumptions; normality and linearity. Based on the *Skewness* (-0.289) and *Kurtosis* (0.125) normality of the outcome variable [*turnover intention*] was ensured. Further, building on the Sig. value of the *deviation from linearity* coefficient of ANOVA test (which should be above 0.05) a linear association was found between the dependent and independent variable [*work stress*]. Thus, Pearson correlation coefficient was used to assess the strength of association among the said variables in the research model, as they are linearly correlated.

Findings and the Discussion

In the study sample, 52.1% of non-managerial female employees were found in the young age (16-25). This is similar to many of the previous studies conducted in Sri Lanka (such as Kaunanayake, 2016) showing that the majority of them are in the young age category. 24% are in between 26 to 35, 11.9% are in between 36 to 45. Only 10.5% of employees are in the matured category. Out of the total respondents 59.4% are single and remaining 40.6% are married. Approximately 67.7% of respondents are from the suburban areas, 21.9% were from urban areas and 10.3% are from rural areas of the country. Analysis reveals that most of those females have studied up to Ordinary Level (57.4). 34.2% of the respondents were in 6 - 12 months of the level of working experience.

The general objective of this study is to assess the association between work stress and turnover intention of non-managerial female employees. Hence, correlation analysis and simple linear regression analysis were done to test the advanced hypotheses. Results indicate a significant positive relationship between work stress and turnover intention ($\beta = 0.862, p < 0.05$). Also, this result is in congruence with the previous studies of Liyanage *et al.*, (2014) and Imran (2018) depicting that work stress has a statistically proven significant association with employee turnover intention.

According to Shire *et al.* (2017), work demands impact on turnover intention. Similarly, the findings of this study show that work demands ($\beta = 0.804, p < 0.05$) significantly impact on employee turnover intention. Hence, unmanageable work demands create an increased risk of employee turnover.

Similarly, relationship at work shows a strong negative correlation with turnover intention ($\beta = -0.805, p < 0.05$) and hence, H_3 is accepted. The findings are similar to previous studies showing that relationship with immediate superiors at work is negatively associated with turnover intention (Cooper & Marshall, 1976). Also, Asgharian *et al.*, (2013) found that relationship with colleagues at work is significantly correlated with turnover intention; even though the direction of association is not unique. Indeed, cordial relationships at work blended with a 'people- focused' management would reduce the risk of the employees leaving.

Moreover, a strong negative association is found between management support and turnover intention ($\beta = -0.850, p < 0.05$) which is significant. This is in line with previous studies that indicate that sound management support decreases turnover intention (such as Hart & Cooper, 2001). Similarly, colleague support has a negative relationship with turnover intention at ($\beta = -0.896, p < 0.05$). Hence, H_4 is accepted. The employee might have cordial and better relationships with colleagues due to their claim and non-confrontational nature, and consequently lower level of stress decrease turnover intention (Hart & Cooper, 2001).

Current findings are consistent with Cooper & Marshall (1976) who found that job role and work changes negatively impact on turnover intention. According to this study job role ($\beta = -0.829, p < 0.05$) and work change ($\beta = -0.570, p < 0.05$) also negatively impact on turnover intention. Thus, clear & non-ambiguous job roles and work changes help to reduce employee turnover intention.

Apart from the work related stresses, turnover was proved to vary among the different demographic groups (Michael *et al.*, 2009). Hence, independent sample t-test and one-way ANOVA test were conducted appropriately to assess the relationships between identified demographic factors such as: educational level, age, work experience, residency, and marital status with turnover intention of those female employees.

Education level of the employee and work experience (seniority) were found to be significantly correlated with turnover intention while a significant association was not found between age, marital status and residency of the employee with the turnover intention.

Moreover, the findings revealed that mean value of turnover intention of three education levels [groups] is significantly different. Hence, the ANOVA post-hoc test was conducted to discover the differences within the groups and among the groups. Tukey HSD test showed that there is a significant difference between the turnover intention of graduates and the employees who had studied up to G.C.E. O/L ($P < 0.05$). Also, a significant difference was not found between the mean values of the other categories. Previous studies show that better educated people tend to be more exposed to leave work places. The reason is they have more qualifications and abilities so that, they have a demand to try for another job (Doughty, 2013). Tukey HSD test shows a significant difference of turnover intention between the experience categories of 3-5 years and 6-12 months ($P < 0.05$). However, a significant difference was not found among the turnover intention of other experience categories. This brings into line with the previous findings of Liyanage *et al.* (2014), who found a significant correlation between work experience and employee turnover intention.

Finally, the current study empirically found a significant association between work stress and turnover intention of non-managerial females working in the apparel industry of Sri Lanka. Current findings are supported by the findings of several previous studies such as: Liyanage

et al. (2014), Qureshi *et al.*, (2013) and Mosadeghrad (2013) who found a positive relationship between work stress and turnover intention of employees; especially, non-managerial females.

Conclusion

Building on the findings it could be concluded that non-managerial females in the apparel industry experiencing higher job demands and negative work relationships are more likely to leave. Further, a greater extent of work control, clarity of job role, management support & colleagues support, will increase the chances of employees staying. Thus, non-managerial females who are open to higher work stress are at a higher risk of leaving than other employees. Hence, the work stress could be concluded as a significant manipulator of employee turnover intention. Moreover, less experienced and less educated employees are more likely to leave than other females.

Recommendations

Redesigning the jobs of non-managerial workers in the apparel sector, keeping an optimum trade-off among efficiency elements and behavioural elements is recommended to create adequate and achievable job demands within the stipulated hours of work. Similarly, by providing an adequate amount of training to improve employees' skills and abilities to meet the job demands are also recommended. Organizations in the apparel sector could possibly enrich good relationship with non-managerial employees, which would positively affect the turnover intention. By organizing cultural events, annual colours night, trips and gatherings to applaud employees while establishing mutual understanding among them is an initiative for that.

Moreover, mutual trust between the management and employees should be ensured for the smooth operations of the business, which will reduce the turnover intention of employees as well. To achieve that trust, management perception toward employees should be changed. Further, management should provide up to date information to enable employees to understand their roles and responsibilities clearly. Also, appropriate work rotations will help them to rescue themselves from repetition and boredom. Similarly, establishing an active channel to obtain the opinions of non-managerial workers for decision making, and rewarding them for the presented effective opinions might be another sound initiative to reduce the turnover intention of employees. While ensuring the job security, establishing a clear path for career progression is also recommended as it is found that less experienced, but educated employees are more likely to leave.

Direction of Further Studies

Though the finding of the current study provides a clear idea about the nexus between work stress and turnover intention of non-managerial female employees working in the Katunayake Free Trade Zone, interpreting the overall situation in Sri Lanka based on this study would be a tough, which is a major limitation of this study. Hence, it is suggested for future researches to consider a bigger sample than this covering the entire country to eliminate the regional (location) differences in the outcome variable. Also, cross industry validations are required as the turnover intention of employees is a common problem in every industry today. In the current study, work stress and the demographic factors were considered separately assuming that other variables remain unchanged. Thus, more empirical evidence is required to generate future studies considering the demographic factors as controlling or moderating factors on the nexus among said variables, in a cross industry sample, which would possibly add more insight to validate the findings of the present study.

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Employees of Different Generations and Their Motivations: Do They Differ?

Wijethunga, S. N.¹ and Razik, R.²

Managing employees across different generations is not only a hot research topic, but also a challenge faced by contemporary business organizations in any industry. Generally, it is believed that managing employees across generations is a daunting and a challenging management task due to the differences in their preferences, behaviors and attitudes.

The purpose of this research is to examine whether motivational drivers differ across three generations of employees working in the Sri Lankan banking sector. This explanatory study has a cross sectional research design and follows the quantitative methodology and the deductive research approach. The results do not exhaustively support the generational stereotypes concerning motivation that is ubiquitous among management practitioners. A difference among motivational drivers across three generational cohorts was observed only for one category of motivational drivers, which were content based drivers, but not for the process based motivational drivers. This research emphasizes the importance of managing individuals by focusing on individual differences rather than relying on generational stereotypes.

Keywords: *Generational Cohorts, Baby Boomers, Generation X, Generation Y, Motivation*

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¹ University of Colombo. (Shiro.wijethunga@gmail.com)

² Department of Human Resources Management, University of Colombo, Sri Lanka (ruwaiha@hrm.cmb.ac.lk)

Introduction

Age diversity at workplace is a hot and popular topic among contemporary researchers and practitioners. One of the main features of the modern workforce is that there are employees from different generations working side by side and closely both with people who are as young as their children and as old as their parents (Zemke et al., as cited in Gamage & Thisera, 2018). Popular stereotypes suggest that generational differences among workers present challenge for Managers (Becton et al., 2014). Wong et al. (2008) indicate that this phenomenon is primarily supported by the notion that key differences exist in the work values and beliefs of employees from different generations, and that failure to address these differences can lead to create conflicts in the workplace.

In the current context of Sri Lanka, the presence of up to four different generations of employees at workplace could be observed at present. In Sri Lanka the standard compulsory retirement age for public sector employees in general is 60, while the same for private sector employees is 55. However, exceptions for this age bars could be observed due to various reasons. There are players in the private banking sector with stipulated general retirement age of 60 years. Stretching of the retirement age in general and in exceptional circumstances, and entry of employees belonging to Generation Z, have augmented the workforce diversity in banking sector in Sri Lanka.

Banking industry in Sri Lanka has experienced a transition period, as a consequence of deregulation of financial sector set forth by financial reforms in 1977 allowing new entrants to the financial service market, development in information and computer technology and globalization of the industry. These factors have changed the way of competition in the banking industry. Reforms in the financial services industry have imposed severe threats on banking institutions enforced by other financial institutions, which are now enabled to provide facilities and price margins with access to low cost credit lines, which were conventionally opened only to banking institutions. Thus the financial services sector in Sri Lanka is exposed to severe competitions, and banking institutions are in a tendency to switch into service quality and service standard as their core competence in dealing with the competition in the industry, which requires a dedicated and committed workforce. (Razik, 2013).

Although there are published researches in the area of employee motivation of employees in the Sri Lankan banking sector, these researches have not addressed the issue of generational differences, and largely they are concerned on what motivates employees in a bank. Research on employees in different generations are particularly important in an era of workplace agility to survive interminable disruptions such as the Covid – 19 pandemics. (Mahmoud et al., 2020). With this backdrop, this study aims to explore whether motivational drivers of employees in banking sector differ across different generations, using the case of the largest licensed commercial bank of Sri Lanka.

Literature Review

The Concept of “Generations”

Kupperschmidt (as cited by Wong et al., 2008) defines a generation as an identifiable group, which shares years of birth and hence significant life events at critical stages of development. Becton, Walker and Farmer (2014) explain that a generation, also called cohort, consists of people of similar age in a similar location who experienced similar social, historical and life events and these shared experiences, differentiate one generation from another. It has also been suggested that each group is likely to develop distinct preferences or traits that distinguishes their feelings towards work and what they desire from work. (Kupperschmidt as

cited by Wong et al., 2008). Researchers generally agree that three generations currently dominate the workforce which are Baby Boomers, Generation X and Generation Y who are also known as millennials.

Baby Boomers (Born 1945 -1964)

According to Gardiner et al., (2013) they are identified as who grew up in traditional families and having traditional values. They are popular for recognizing authority, admiring people and display caring, competent and honest traits. The present time period represents an important transitional period to come closer to their retirement period and move towards post-parenthood life stage. They are also in the peak time of professionalism ladder. Baby Boomers have also been described by Andrade and Westover (2018) as a generation with optimistic, team oriented antigovernment, focus on equal rights, personal gratification and questioning everything. They are known to be long term employment seekers and workers. They hold positions to influence and authority in workplace no doubt the length of their service and may lack of thinking on financial planning and rather look on work satisfaction (Anantatmula & Shrivastav, 2012; Gardiner et. al., 2013).

Generation “X” (Born 1965 – 1980)

According to Gardiner et al., (2013) talk on Gen “X” and state their name – Generation “X” was named because as they were perceived as nameless generation, living under the shadow of Baby Boomers. Breaking down traditional families, rise of woman participation to workforce and therefore raised by single parent and skeptical and pessimistic. They are called as change agents and cautious, honest, straightforward, brand conscious, aware of value and quality but not loyal to brand. As per Andrade and Westover (2018) this generation is known to be diverse, fund, informality, independent, lack of loyalty, pragmatic, highly educated, entrepreneur and self-reliant. They have witnessed layoffs and inflation and largely imbalance in work life, which their divorce rates are high. They like to add value to organizations prefer to work in nonhierarchical structural organizations. They are loyal to their employer (Anantatmula & Shrivastav, 2012). According to Smola and Sutton (2002) it is identified as portrayed, comfortable with change and personal values and goals are more important than work related goals.

Generation “Y” (Born 1981 – 2000)

They are also known as Echo Boomers, who are environmentally conscious, globally & socially aware than previous generations. They value freedom, status at work. They are exposed to brands from birth and very much demand latest trends. They are more towards fashion, style and coolness than others (Grace & Hiry, 2013). Then they are very much familiar with online, social networking and well-connected virtually. They are able to adapt to different situations and to take risks and therefore job hop frequently (Andrade & Westover, 2018). They also do not see work life balance, hence like to work at any time at any place. They look for high job profiles in short period, enjoy challenges while growth and recognition expected. Grown up with technology as a large part of their lives comfortable with change, see less important on job security, enjoy challenge on new opportunities, high level of confidence, highly socialized group who seeks flexibility and career growth rapidly (Hart, 2006; Smola & Sutton, 2002).

The Concept of Motivation

Motivation is a specific drive that drives actual performance or employee enthusiasm which leads into stronger performance. There are many dichotomies of motivation theories and for

the purpose of this study the dichotomies of content-based theories and process-based theories are considered.

Content Based Theories

Content (need) theories focus on the internal factors of the individual needs. Major content theories are Maslow's Hierarchy of needs, ERG theory, Herzberg Motivation – hygiene theory, McClelland's – three needs theory and Relatedness and growth theory. Mainly content theories are formed according to the priority of need patterns. Basically, starting from the basic needs like food, shelter and sex, motivation drive extrinsically and intrinsically towards different tendency (Badubi, 2017).

According to Ball, (n.d.) need theories describe the willingness to exert high levels of effort toward organizational goals, conditioned by the effort's ability to satisfy some individual need. Needs also could be defined as an internal state that makes certain outcomes appear attractive and unsatisfied need creates tension that stimulates drives within the individual. These drives then generate a search behavior to find goals that, if attained, will satisfy the need and lead to the reduction of the tension. Needs are physiological or psychological deficiencies that arouse behavior. These vary over time and place, as they can be strong or weak and influenced by environmental factors.

Process Based Theories

Process based theories attempt to identify the relationship among the dynamic variables which make up motivation. These theories are concerned more about how our behaviour is initiated, directed and sustained. Process theories place emphasis on the actual process of motivation. (Mullins, 2005). According to Chenari and Asadi (2016) Process theories are concerned of how employees select their behavior to adapt with their needs. Equity theory and expectancy theory (Adams, 1963, 1965; Vroom, 1964) which are process theories of motivation, represent distributive justice and assumption of cost and benefit. They are mainly concerned with distributive justice, procedural justice on motivation and behaviour choice. Process Theories based on perceptions, attitudes and behaviours. Individuals analyze the environment, develop reactions and feelings and react in certain way with motivational strategies.

Existing Research on the Areas under Study

According to Mahamoud et al. (2020) research on generational diversity and motivation and are a novel research field. In a study published in 2020 concerning Canadian service sector, which they claim as the first paper that focusses on generational differences in valuing motivation, Mahamoud et al (2020) conclude that, intrinsic motivation contributes more to Generation Z employees' overall work motivation than it does for Generation X and Generation Y.

In another study which was focused on three generations of working Australians conducted by Wong et al., (2020) only few meaningful differences were found between the personality and motivations among three generations. They found that the marginal differences were related more to age than generation.

In local context, there are no published research examining the generational cohorts and their motivational drivers either in banking industry or any other industry with public or private ownership. A comparative study conducted by Razik (2013) on perceived motivational drivers between licensed commercial bank and licensed specialized banks in Sri Lanka revealed that bank employees in Sri Lanka are motivated by intrinsic rewards, regardless of the type of the bank they worked for. However, this study focusses on the perceived motivation of such employees and does not incorporate generational diversity to the study.

Focus of the Study

As explained in the literature review, it is evident that researcher's views on behavioral aspects of employees belonging to different generational cohorts are largely polarized, while some affirm the existence of such differences in certain contexts, some others deny the existence of any differences. In the context of generational cohorts and their motivations, Wong et al., (2008) mention that research findings examining generational differences in personality and motivational drivers in the workplace are limited. There were no published research concerning generational diversity in banking, thus, this study aims to fill this research lacuna by examining whether differences in motivational drivers exist across three different generational cohorts in the banking sector of Sri Lanka using the case of the largest financial institution of the country.

Conceptual Framework

The main constructs of this study are generational cohorts, the content drivers and the process drivers which are derivatives of broad-based concept of motivation. Generational cohorts are the independent variables, while content drivers of motivation and drivers of motivation serve as the dependent variables of the study. Figure 1 indicates the conceptual framework of the study, summarizing how the variables are operationalized.

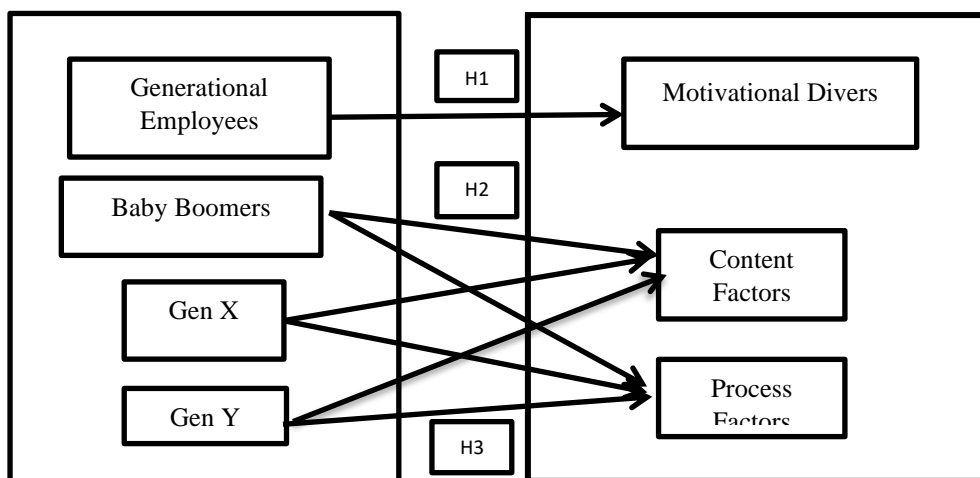


Figure 1: Conceptual framework

To examine whether there is a difference in motivational drivers in general among different generational cohorts employed in the banking sector, and particularly towards content and process factors of motivation following three hypotheses were developed.

- H₁- There is a statistically significant relationship between employees of different generations and their motivational perspectives.
- H₂- There is a statistically significant relationship between employees of different generations and their preference to content based motivational factors.
- H₃- There is statistically significant relationship between employees of different generations and their preference to process based motivational factors.

The Selected Organization

The selected bank is the largest financial institution of Sri Lanka with a history of 90 years. The bank has an employee base of 8503. Table 1 below present a key financial figure of the institution and its position in the banking sector of Sri Lanka.

Table 1: Financial figures of the selected bank and banking sector (Year 2019)

Indicator Rs LKR Bn	Selected Financial institution	Banking sector in Sri Lanka	Percentage representation of the bank within the industry
Loans and Advances	1,648.7	8,122.4	20%
Deposits	2,005.2	9,162.4	22%
Profit before tax and VAT	40.2	173.0	23%
Number of Branches	627	2,907	22%

Source: Annual report of the selected bank (2019) & Annual report of the Central Bank of Sri Lanka (2019)

Table 1 explains the role of the selected bank within the Sri Lankan banking sector, as it shares more than 20% of stake in key indicators of the sector in the country. Thus, makes a fair representation of the Sri Lankan banking sector in terms of assets, liabilities, profits and operations.

Design and Methodology

The study follows cross sectional research design and the quantitative methodology with a deductive research approach.

Sample and Procedure

Participants of the study were employees who have worked for more than 5 years at the selected bank. In order to be eligible for all the reward schemes available, an employee must complete 5 years of the service; hence the caveat of 5 years was introduced. Due to impracticability in surveying the entire population, budget constraints, limitations travelling issues, and eliminating geographical variations the sample selection was done from the head office and branches located in the western province, thus convenience sampling strategy was used.

Total number of staff with work experience of more than 5 years, working for Western Province was 2422 (Bank of Ceylon, 2018). As per the sample size identification criteria by Gill, Johnson and Clark (2010) the sample size (which is synonymous with the responses) for a population of 3000 with confidence level of 95% and margin of error rate of 5% is indicated as 322. Ethical clearance, approval for the questionnaire and permission for data collection was obtained from the management.

Measures

A self-administered questionnaire was used to measure variables of the study. In measuring the content based motivational drivers, 10 measures which were derived from 4 major content theories, and the process based motivational drivers were tested with 10 measures derived

from 3 major process theories. The close ended questionnaire carried 47 questions, out of which 7 questions referred to the demographic data. Out of 40 other questions which followed the 5-point Likert scale model, 20 measured the content-based drives, and 20 tested the process-based drivers. The questionnaire was tested for content validity, which checks whether the instrument cover the entire domain related to the variable, or construct it was designed to measure (Heale & Twycross, 2015), and two experts confirmed the face validity of the instrument.

A pilot study was conducted with 60 participants, and the responses were examined for internal consistency reliability using Cronbach's Alpha. All 40 items were above the standard reliability coefficient of .70. The Cronbach's Alpha coefficient for the 40 items ranged between the lowest values of .919 and highest value of .926.

Table 2: Details the measures used

Variable	Dimensions	Related Theories	Measures
Dependent Variables	Content Factors	Marlow's Hierarchy of needs	<ul style="list-style-type: none"> • The work itself • Responsibility • Advancement • Growth • Achievement • Recognition • Interpersonal Relationships • Job Security • Work Conditions • Salary
		Herzberg Two factor theory	
		Alderfer's ERG theory	
		Mcclelland's Three need theory	
	Process Factors	Goal setting Theory	<ul style="list-style-type: none"> • Assignment of SMART Goals • Achievement & Recognition when achieving of Targets • Satisfaction & enjoyability in the job & working conditions • Fairness & equity in promotions • Fairness & equity in Recognition • Fairness & equity in distribution of targets • Fairness & equity in development • Ability to display talents • Performance base rewards • Personal existence and transfer policy
		Equity theory	
		Expectancy theory	

Source: Author's work

Table 3: Reliability statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
.923	.922	40

Source: SPSS Output

The printed questionnaires were distributed to the branches in the region through internal courier service with due permission. An online questionnaire was deemed unfit for data collection in the banking environment, since access to internet is restricted due to security measures. Upon confirming the internal consistency and reliability of the measures, 460 copies of the questionnaires were distributed, and 330 responses were received with a response rate of 71.74%.

The sample consisted of 75 Baby Boomers and they were 22.7% of the total sample. Employees belonging to the cohort of Generation X in the sample were 79 in numbers and accounted for 23.9% of the sample. The largest cohort of generation in the sample was represented by the Generation Y employees. In total they were 176 in numbers and as a percentage they were 53.3% of the total sample.

Data and Analysis

Upon completion of the data collection, the normality test was run in order to decide the type of tests that should be run to check the correlation between variables. Both Kolgorov – Shimov test and Shapiro – Wilk tests returned p values higher than 0.5 thus the data were not normally distributed thus nonparametric tests. In analyzing the correlation between variables, two non-parametric measures Kendall's tau_b and Spearmen's rho tests were run for both individual measures in each category of dependent variables, and for each dependent variable separately. Since the study involved 40 measures, the SPSS output tables for individual measures are not presented in the paper due to space restrictions, however the summaries of SPSS outputs are encircled.

Table 4: Correlations for Content drivers of motivation

Correlations				
			GENERATIONAL TYPES	CONTENT
Kendall's tau_b	GENERATIONAL TYPES	Correlation Coefficient	1.000	.041
		Sig. (2-tailed)	.	.348
		N	330	330
Spearman's rho	GENERATIONAL TYPES	Correlation Coefficient	1.000	.052
		Sig. (2-tailed)	.	.346
		N	330	330

Source: SPSS Output

As per Table 4 the relationship between Generational cohorts and overall content drivers were weak, for both Kendall's tau_b and Spearman's rho, and the relationship was also insignificant with P values exceeding .05 for both tests. However, when analyzing individual measures of content drivers, out of the 20 factors, 18 factors show moderate relationships, with significant P values.

As per the Table 5 the relationship between generational cohorts and overall process based motivational drivers were weakly positive under both tests and similar to the P values for content factors, the correlation was insignificant for process drivers as well. However, the test results in investigating the relationship between generational cohorts and individual measures of the process-based drivers, 11 out of 20 factors were moderately positive with significant p values.

Table 5: Correlations for Process based drivers of motivation

Correlations				
			GENERATIONAL TYPES	PROCESS
Kendall's tau_b	GENERATIONAL TYPES	Correlation Coefficient	1.000	.059
		Sig. (2-tailed)	.	.167
		N	330	330
Spearman's rho	GENERATIONAL TYPES	Correlation Coefficient	1.000	.079
		Sig. (2-tailed)	.	.150
		N	330	330

Source: SPSS Output

Since the study focusses on examining a statistical significance between two or more groups of an independent variable, Kruskal – Wallis H test and one – way Anova tests were performed to investigate whether there are significant differences between the two dependent variables for the different groups of independent variable, and for each measure of the dependent variable. However, in comparing which groups differed with each other Games – Howell Multiple Comparisons test was used.

As indicated in the Table 6 to 9 below, the Kruskal – Wallis H tests, and Games Howell Multiple Comparisons tests there is no significant difference for both over content and process based motivational drivers for the three generational cohorts.

Table 6: Kruskal – Wallis H test results for content-based drivers.

	CONTENT
Kruskal-Wallis H	.984
df	2
Asymp. Sig.	.611

a. Kruskal Wallis Test
b. Grouping Variable: GENERATIONAL TYPES

Source: SPSS Output

Table 7: Kruskal – Wallis H test results for process-based drivers.

Statistics ^{a,b}	
	PROCESS
Kruskal-Wallis H	3.246
df	2
Asymp. Sig.	.197
a. Kruskal Wallis Test	
b. Grouping Variable: GENERATIONAL TYPES	

Source: SPSS Output

However, when the same tests are performed for the individual measures used to measure both dependent variables returned different levels of significance for each of the factors. Table 10 summarizes the number of measures (out of all 40 measures used to assess the dependent variables) that were both significantly and insignificantly different among the three cohorts of generations, under the three tests performed.

Table 8: Games Howell Multiple Comparisons tests results for content – based drivers

Multiple Comparisons						
Dependent Variable: CONTENT						
Games-Howell						
(I) GENERATIO NAL TYPES	(J) GENERATI ONAL TYPES	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
BELOW 37	38-53	-.03166	.06453	.876	-.1846	.1213
	54 ABOVE	-.05906	.05196	.493	-.1819	.0638
38-53	BELOW 37	.03166	.06453	.876	-.1213	.1846
	54 ABOVE	-.02740	.06868	.916	-.1901	.1353
54 ABOVE	BELOW 37	.05906	.05196	.493	-.0638	.1819
	38-53	.02740	.06868	.916	-.1353	.1901

Source: SPSS Output

Table 9: Games Howell Multiple Comparisons tests results for processed – based drivers

Multiple Comparisons						
Dependent Variable: PROCESS						
Games-Howell						
(I) GENERATIO NAL TYPES	(J) GENERATI ONAL TYPES	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
BELOW 37	38-53	.01257	.07580	.985	-.1672	.1923
	54 ABOVE	-.11206	.06125	.163	-.2570	.0328
38-53	BELOW 37	-.01257	.07580	.985	-.1923	.1672
	54 ABOVE	-.12463	.08244	.288	-.3199	.0706
54 ABOVE	BELOW 37	.11206	.06125	.163	-.0328	.2570
	38-53	.12463	.08244	.288	-.0706	.3199

Source: SPSS Out

Results for Hypotheses: H₁

Table 10: Summary of overall significant and insignificant drivers

Method of Analysis	Significant drivers	Insignificant drivers
Spearman Correlation Kendall's tau_b	26/40	14/40
Kruskal Wallis	26/40	14/40
One Way ANOVA -	25/40	15/40

Sources: Author's work

Comparing the results of the three tests, 25 to 26 drivers out of the 40 overall motivational drivers present statistically significant level of differences in motivational drivers for employees in three different generations cohorts. A very closer perception relationship with Gen X & Gen Y and highly significantly difference between Gen Y and Gen X respectively, are observed. Therefore, as majority of the drivers show an acceptable significance level the null hypothesis of H₁ is rejected, concluding that there is a statistically significant relationship between employees of different generations and their motivational drivers.

Results for Hypotheses: H₂

Table 11: Summary of significant and insignificant drivers: Content – based drivers

Method of Analysis	Significant drivers	Insignificant drivers
Spearman Correlation & Kendall's tau_b	18/20	2/20
Kruskal Wallis	17/20	3/20
One Way ANOVA -	18/20	2/20

Source: Author's work

In all three methods out of the 20 measures used to assess content – based drivers there were 17 to 18 factors which showed statistically significance differences among different generational cohorts, proving the content based motivational drivers differ among employees of different generations. Thus, the null hypothesis of H₂ is rejected concluding that there is there is a statistically significant relationship between employees of different generations and their preference to content based motivational drivers.

Results for Hypotheses: H₃

Table 12: Summary of significant and insignificant factors: Content – based drivers

Analysis Method	Significant drivers	Insignificant drivers
Spearman Correlation & Kendall's tau_b	9/20	11/20
Kruskal Wallis	9/20	11/20
One Way ANOVA -	7/20	13/20

Source: Author's work

Compared to the content- based drivers, the results of the all the tests for process – based motivational drivers depict more numbers of insignificant factors than significant factors. Indicating that for these factors, there is no statistically difference among employees belonging to different generations. This concluded that for hypothesis 3, the null hypothesis is accepted confirming there is no significant employees of different generations and their preferences of process based motivational drivers.

Conclusions and Discussions

Albeit the popular viewpoint among management practitioners and business writers concerning generational diversity which claim that employees belonging to different generations have different preferences, values and beliefs, the results of this study indicate that this notion could be only partially accepted for employees of banking sector in Sri Lanka. Although the results indicated that motivational drivers differed among employees of different generations in general, the differences were largely towards the content-based drivers, and not for the process-based drivers.

Evaluating the inter-generational significance levels for content-based drivers mainly Baby Boomers depicted more significant differences than both of Generation “Y” and Generation “X”. Moreover, Generation “X” showed significant differences than Generation “Y” for drivers of pride in the job, non-financial benefit motivation and relationship with co-workers.

Generation “X” demonstrated significant differences than Baby Boomers for job security, financial benefits, support and relationship with co-workers and management and likeness on the people they work with. Generation “Y” depicted significant differences than other two generations in job security, distance of travelling, financial benefits motivation, relationship and support from co-workers and with top management, acceptability and likeness to people they work with. There by it could be concluded that Baby Boomers have a significant difference towards other two generations and there were only few differences between Generation “X” & Generation “Y”.

In the context of process- based drivers, over 50% of the process-based drivers did not reveal any significant differences between generations and the same result was observed between inter-generations. There were six drivers that depicted a difference between Baby Boomers and the other two generational cohorts. These drivers included performance-based promotions, fairness and transparency of assessments, promotions, working conditions, reward base performances and valuing the services of employees. There were only 2 drivers with significant difference between Generation ‘Y’ and Generation “X”. Thereby it could be concluded that there is no significant difference for process- based motivational drivers among different generational cohorts.

The findings are in line with the ideologies on generational differences propagated by King et al. (2019) where they emphasis that generational preferences and values among different age groups at work are quite small and there is a considerable variety of preference and values within any of these groups. They further indicated that employees often change over their presences overtime due to varying priorities, demands, experiences and physical capacities and not merely based on the age. King et al. (2019) also pustulate that what matters at workplace is not differences between generations but people’s beliefs that these differences exist.

Limitations, Significance of the Study and Directions for Future Research

This research followed a case-based approach with the largest financial service provider of Sri Lanka. This limitation deprives generalizing the findings to the banking industry, although the selected institution is the largest player in terms of loans, advances, profits and employment.

Further, the study only focuses on generational type as the solitary variable in assessing a possible difference in motivation among employees. However, there could be other variables such as age, social exposures, class which may cause a difference in motivation among employees, either with a direct effect or through controlling (mediating or moderating) effect.

Theoretically, this research fills a lacuna in the research in the subject area and sows seeds on incorporating generational differences into future studies concerning other contexts. Practically, the study sheds valuable insights to practitioners in devising their motivational strategies and will aid banks to redesign their reward management practices. In this endeavor business organizations with a generationally diverse workforce should emphasize on individual differences rather than relying on generational stereotypes, in devising their motivational and reward strategies. Further organizations comprise of individuals who work together in achieving common goals. Hence this study provides an understanding on behaviors which leads to motivation of employees of different generations, who need to work together in achieving common goals of the organization.

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The Effect of Supportive Work Environment on Employee Commitment-Mediating Role of Employee Engagement in Apparel Industry in Sri Lanka

Jayasinghe, W. G. N. M.¹ and Thavakumar, D.²

Supportive work environment develops an atmosphere to attract and retain a talented and motivated workforce to an organization. It further improves the commitment and dedication of employees towards more work. As a key player of the Sri Lankan economy and the second largest foreign exchange earner to the country, apparel industry requires to consider to keep such a workforce by creating a supportive work environment. In Sri Lankan context, few empirical studies are available which were addressed on the work environment in the apparel sector. The existing empirical knowledge gap concentrates on giving attention on this aspect. Therefore, the objectives of this study were as to analyze the relationships among the supportive work environment, employee engagement, employee commitment and explore the mediating role of employee engagement in the effects of supportive work environment on employee commitment of selected apparel firms in Sri Lanka. To achieve these objectives, data were collected from 203 machine operators of the selected two apparel companies using structured questionnaire. The sample was chosen through Stratified Random sampling technique. Stratified sampling is where the population is divided into sub groups (strata) and a random sample is taken from each subgroup. Researcher was chosen machine operators based on the company size from the whole population. In this case, subgroup was grounded on company size. The data were analyzed by using descriptive statistics, correlation and regression analysis. In this study, supportive work environment is the independent variable, employee commitment is the dependent variable and employee engagement is the mediating variable. The results indicated that significant positive relationships exist between independent, dependent and mediating variables and complementary partial mediation effect of employee engagement in the effects of supportive work environment on employee commitment. As a result of this study, Managers of Apparel companies must give their attention for combination of supportive work environment and employee engagement to increase level of employee commitment. This study only covered two firms in Nuwaraeliya Apparel Industry. So in future scope will be expanding beyond the research area, it will be effective and useful.

Keywords: *Apparel Industry, Employee Commitment, Employee Engagement & Supportive Work Environment*

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¹ Department of Management, Faculty of Commerce and Management, Eastern University, Sri Lanka. (manojjayasinghe21@gmail.com)

² Department of Management, Faculty of Commerce and Management, Eastern University, Sri Lanka. (dila1981@gmail.com)

Introduction

Human resource is one of the most important resources in any organization. The skills of employees are still considerable; they are considering as assets for any organization because they have vast impact on organizations. Work environment is one of the most essential factors in keeping an employee satisfied in today's modern world. In contemporary organization setting, work environment is continuously changing differently and in several ways (Danish, Ramzan, & Ahmad, 2013). Management's new challenge is to form a work atmosphere that attracts, keeps and motivates its workforce. Organizations have to be keep up the learning & working climate to attract the talented workforce (Kyndt, Dochy, Michielsen, & Moeyaert, 2009). The responsibility is with managers and supervisors at all levels of the organization. Industries must step outside their traditional roles and comfort zones to look at new techniques of working. They need to create a work environment where employees happy what they do, feel like they have a reason, have pride in what they do, and can reach their maximum level.

A supportive work environment determines and facilitate level of employee's concentration, performance as well as the success of the business. Therefore, supportive work environment factors are essential predictors of employee commitment for achieving organizational goals. Committed employees work for the goals of organization and continuously have the desire to work within the same organization. On other hand, a supportive work environment considered as a key determinant of employee engagement. Employers should also highlight the unique features of the working environment to sustain their employee engagement, motivate the employees, and attract new employees to their organization (Anitha, 2014). Peer relationship, supervisory relationship, organizational policies and procedures, supportive work climate and workplace environment are essential elements of a positive work climate that foster employee engagement (Shuck, 2010). An engaged employee looks to be more committed to the organization and brings good business results (Richman, Civian, Shannon, Hill, & Brennan, 2008).

Problem Statement/Research Gap

Apparel Industry plays an important role in Sri Lanka's economy. Due to the globalization of the apparel industry, the assurance of the USA quota is no more an advantage for Sri Lanka. In present, Sri Lanka has to compete with the world's most efficient garment-producing countries such as China. Lower productivity and poor manufacturing processes remain a weakness in this industry affecting competition with the other producers (Dheerasinghe, 2009). Therefore, organizations have to concern about new working methods and techniques to compete with the world.

There are few researches have studied that, "work environment positively impact on the employee commitment at their work places (Ushie, Ogaboh, & Okorie, 2015)", the research conducted in North East Nigeria and respondents were the manufacturing employees, "the work environment positively impact on employee commitment (Funminiyi, 2018)". There is dearth of studies have addressed the work environment and employee commitment in Sri Lanka as well as dearth of concern about the apparel industry regarding this topic. And also, there exists a clear empirical knowledge gap. Researcher examines this problem in this study and attempts to full fill this knowledge gap relating to Nuwaraeliya.

In this context, the research problem for this study is identified as;

"Whether there is a mediation role of employee engagement in the effect of supportive work environment on employee commitment in selected apparel firms in Sri lanka?"

Research Questions

- What are the nature of relationships existing among supportive work environment, employee commitment, employee engagement of selected apparel firms in Nuwaraeliya?
- Does the employee engagement do a mediating impact one the effects of supportive work environment on employee commitment of selected apparel firms in Nuwaraeliya?

Research Objectives

- To examine the relationships among supportive work environment, employee commitment, employee engagement of selected apparel firms in Nuwaraeliya.
- To explore the mediating role of employee engagement in the effects of supportive work environment on employee commitment of selected apparel firms in Nuwaraeliya.

Literature Review

Supportive Work Environment

Supportive work environment can be defined as an environment that attracts individuals into an organization, encourages them to remain in the workforce and enables them to perform effectively (Funmini, 2018).

Employee Commitment

Employee Commitment is a psychological binding of an individual to the job and the organization (Indradevi & Veronica, 2018).

Employee Engagement

Employee engagement is the multiple emotional, cognitive and behavioral dimensions of an employee's consistent level of effort, commitment and connection to their job (Stanley, 2016).

Employee Engagement Mediate the Effects of Supportive Work Environment on Employee Commitment

Abbas (2017) found that employee engagement mediates the effect of organizational culture and leadership style on employee loyalty. Ram and Prabhakar (2011) studied the mediating role of employee engagement in the relationships between potential antecedents of engagement and work-related outcomes such as job satisfaction and involvement. Based on the above, this study is proposed.

Conceptual Framework

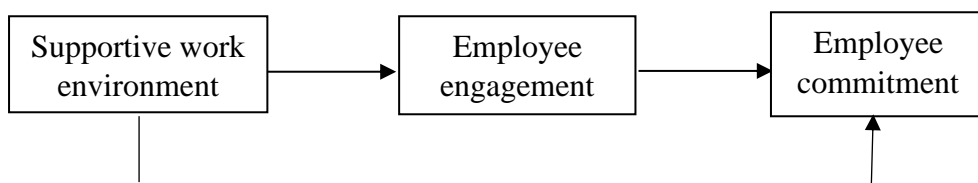


Figure 1: Conceptual framework

Source: Hanaysha (2016), Kundu & Lata (2017)

Theoretical Background

Human Relations Theory

The human relations approach emphasized the need for a clear understanding of the importance of human attitudes, capacity and abilities in terms of organizational effectiveness. The human relations approach sought to respond to emerging social pressures with a more enlightened treatment of employees. This body of work focused on the idea that people need companionship and to have a sense of belonging and seek satisfaction in the social relationships they form at work.

Elton Mayo and others developed this theory. The theory believes in the importance of recognizing human beings and their needs as paramount in achieving organizational commitment and high productivity. Human relations theory emphasize the fact that participation aid management in integrating workers with the organization. Both managers and employees can realize goal and attain stronger commitment and satisfaction. The theory asserts that, there are many rewards, which employees expect from participative management. These include conducive work environment, greater commitment, motivation, manageable workload, greater freedom to manage resources to reach objectives and greater job satisfaction (McGregor, 1960).

The conclusions from this theory were that groups of workers quickly become self-governing teams and, when fully involved in effective two-way consultation in decisions, which affect them, will be highly committed to management and organizational goals.

According to above theory, companies must recognize employee's needs and attitudes to achieve organizational commitment as well as the high productivity. One of the employee need is a conducive or supportive work environment. To achieve high employee commitment, organizations try to giving a supportive work environment to their employees. Therefore, above conceptual framework explains if organizations provide supportive work environment to their employees they can achieve employee commitment as well as the employee engagement. In other words, supportive environment significantly effects on the employee commitment.

Methodology

This study mainly focuses on whether there is an effect of supportive work environment on employee commitment with a mediating role of employee engagement in selected apparel firms in Nuwaraeliya. Study population for this study identified as all machine operators who are working in selected Garment factories in Nuwaraeliya. Stratified Random-sampling technique and from strata was used to select the required number of respondents from each Garment factories for the sample. Total numbers of 203 respondents were selected in order to collect the data required for the study. These 203 respondents were represented from all population. Researcher applied quantitative methodology for this study. Thus, survey method has been adopted. The questionnaire was used to collect the data from the study area. The questionnaire developed based on two parts namely personal information and research information. Personal information includes factory name, age group, gender, experience, educational qualification. Research information includes 37 statements related to variables (supportive work environment, employee engagement and employee commitment) in the study.

The variables in the research (supportive work environment. Employee engagement and employee commitment) were measured through questionnaires with five point Likert Scales. As five point Likert scale respondents can express their perception strongly disagree to

strongly agree. According to the characteristics of gathered data, it was analyzed; the quantitative data analysis function was facilitated by statistical package for social science (SPSS) 22th version. In order to evaluate collected data from the questionnaire, Univariate and Bivariate analysis were used. Cronbach's alpha for reliability test, frequency and descriptive analysis tools, Pearson coefficient correlation were used to hypothesize the questions.

Results and Discussion

The research is examining the relationships among supportive work environment, employee engagement and employee commitment of selected Apparel firms. Correlation analysis was made to get results. Researcher identified following relationships. There is strong positive relationship between supportive work environment and employee commitment ($r = 0.771$, $p < 0.05$). The strength of the correlation between work environment and organizational commitment is moderate positive significant (Cheng & Kadir, 2018). The result finding which proved that there is relationship between supportive work environment and employee commitment.

There is strong positive relationship between supportive work environment and employee engagement ($r = 0.674$, $p < 0.05$). Consequently, the findings are much the same with some of existing researches. According to Anitha (2014), there is a significant relationship between work environment and employee engagement. The result finding which proved that there is relationship between supportive work environment and employee engagement. There is strong positive relationship between employee engagement and employee commitment ($r = 0.760$, $p < 0.05$). Wachira (2013), empirically found that there was a strong positive relationship between employee engagement and employee commitment ($r = 0.882$). The result supports of the finding of this present research. The findings of the study explained that when employees are provided with satisfactory organizational climate, supervisory support, good peer relationship and organizational support, they would be more engaged with the organization and committed with the organization.

According to the above derived results, 70% of variability in employee commitment of apparel companies is accounted by combination of supportive work environment and employee engagement jointly. 59.5% of variability in employee commitment of apparel companies is accounted by supportive work environment and 57.7% of variability in employee commitment of apparel companies is accounted by employee engagement individually without considering supportive work environment. At the same time, 45.5% of variability in employee engagement of apparel companies is accounted by supportive work environment. Finally, it could be concluded that employee engagement is playing a partial complementary mediating role in the effect of supportive work environment on employee commitment of apparel companies. Despite the interesting findings in this study, a number of limitations should be acknowledged. First of all, there is no such comprehensive published research relating to the research topic in the context of Sri Lanka. Due to unavailability of existing literature in Sri Lankan context most of the literature and variables were identified through international studies conducted pertaining to the research topic. For this research, data is only obtained in the selected two apparel firms in Nuwaraeliya in a quite small of 203. Due to this fact, the extents to which the results can be generalized are limited. Another limitation is the use of cross-sectional design in the study. The data is gathered at one-time point, and therefore no conclusion can be taken about causal relations.

Conclusion

Conclusion have been derived from the finding to meet the research objectives. Based on the research study regarding the effects of supporting work environment on employee commitment with the mediating role of employee engagement in apparel companies. Mainly researcher used correlation analysis and regression analysis for achieved the objectives of the research. This research was conducted with two hundred and three of machine operators in selected apparel companies in Nuwaraeliya.

First objective of the research, which is examine the nature of relationships among supportive work environment, employee engagement and employee commitment of selected Apparel firms. Correlation analysis was made to get results. Researcher identified following relationships. There is strong positive relationship between supportive work environment and employee commitment ($r = 0.771$, $p < 0.05$). There is strong positive relationship between supportive work environment and employee engagement ($r = 0.674$, $p < 0.05$). There is strong positive relationship between employee engagement and employee commitment ($r = 0.760$, $p < 0.05$).

According to the above derived results, 70% of variability in employee commitment of apparel companies is accounted by combination of supportive work environment and employee engagement jointly. 59.5% of variability in employee commitment of apparel companies is accounted by supportive work environment and 57.7% of variability in employee commitment of apparel companies is accounted by employee engagement individually without considering supportive work environment. At the same time, 45.5% of variability in employee engagement of apparel companies is accounted by supportive work environment. Finally, it could be concluded that employee engagement is playing a partial complementary mediating role in the effect of supportive work environment on employee commitment of apparel companies.

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Impact of Electronic Human Resource Management on Employee Job Performance in Multinational Entities in Colombo District, Sri Lanka

Karunarathna, T. D.¹ and Nanayakkara, N. W. O. K. D. S. P.²

Competition in the business environment is becoming rigorous over the years. As a result, concern over gaining and retention of the competitive position within the market place become the major concern by the organizations. In order to achieve this objective, employee performance is vital for any organization and ultimately it will generate core competencies within the organization which are hard to imitate by the rival in short term. This study primarily intends to study the effect of electronic human resource management on employee job performance in special reference with Multi National Entities in Colombo District, Sri Lanka. The research is carried out as an exploratory cross sectional study and self-completion questionnaire is administered to gather relevant data from the participants. Size of the sample is 152 and the simple random sampling method was employed to create the sample from the population. Factor analysis, frequency distribution analysis, correlation analysis and regression analysis were employed to achieve the objectives of the study. Through this study it was found that, electronic human resource management plays a vital role to influence the job performance of the employees in multinational entities. Moreover, it was found that there is a positive relationship between the electronic human resource management with employee job performance. As a conclusion, in order to be competitive within the market place and to achieve organizational productivity it is recommended that organization must have a sound electronic human resource management practices and also it will permit to attract best breed towards the particular employer.

Keywords: *Electronic Human Resource Management, Job Performance, Multi National Entities*

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¹ University of Sri Jayewardenepura, Sri Lanka. (tharindukarunarathna@gmail.com)

² Department of Marketing Management, University of Kelaniya, Sri Lanka. (2017_sonali@kln.ac.lk)

Introduction

Background of the Study

Human resource is the most valuable asset in an organization. According to Celaya (2015), with the globalization of business human resource management becomes more and more complex to control across the world. Because of the fast moving technology and learning environment it seems very difficult to stick to a concrete concept of managing human resource across the business and global. With the implementation of cloud based computing, it is slowly and steadily moving towards the HRM process (Willcocks, Venters & Whitely, 2013) while reducing the complexity of managing the human resource. As a result of cloud computing and using IT support in HRM, E-HRM becomes more popular and HRM activities become less complex when comparing to its early years (Kumar, 2017).

With the implementation of cloud computing towards the e-HRM, HRM process becomes easy and as a result of that, today most of the leading MNEs following this advanced e-HRM to manage their human resource in an effective and efficient manner. From Sri Lankan point of view this is relatively a new concept and few leading companies such as Dialog Axiata, Unilever Sri Lanka, Nestle Lanka, Fonterra Brands Lanka, Allianz Insurance Lanka, Fairfirst Insurance and HSBC are using this e-HRM technology in their HRM process. This cloud based e-HRM is surprisingly a new hurdle in HRM because it eases the work of HR professionals while minimizing cost and time associated with HR functions. So, it is obvious that new cloud-based e-HRM will directly impact on employee job performance and this study is based on how Sri Lankan firms use this new concept of HRM towards their employee job performance.

Research Problem

According to Gerardine and De Sanctis (1986), before 20th century most of the HRM functions were done manually by HR professionals and many organizations failed to process HRM functions towards the development of their organization because of the lack of existing knowledge and technology. Use of traditional methods lack the capability of capture employee attendance in real time hence it is unable to track employee punctuality which is considered as one of the main aspect of employee discipline (Othman et al., 2017). These kind of issues may affect to the employee job performance so e-HRM was introduced to cater those types of issues.

With the development of SHRM (Strategic Human Resource Management), the main concern for HRM professionals is to reduce employee cost while increasing the job performance (Kumar, 2017). To obtain those objectives they move from their traditional HRM to web based HRMS. That is the revolutionary point of HRM because from that point onwards HRM professionals are fully aware about new trends in HRM and how it will affect to employee overall performance (Ghosh & Tripathi, 2018).

However, with the further development of HRM towards the e-HRM, HRM functions become less complex and easy to handle while improving the overall employee and organizational performance. Thanks to e-HRM, HR professionals are now more future oriented and one click away from become more effective (Stone & Dulebohn, 2013).

According to Ghosh and Tripathi (2018), previously there have been few HR functions automated through e-HRM. But however with the development of cloud based systems, more HR functions were automated while increasing the scope of e-HRM. It is one of the highlighted points in this research area because with that automation of many HR functions, HRM becomes more global subject and it will directly involve to the employee job

performance (Hertel & Schroer, 2008). Thus, by investigating this research paper one can be able identify the connection of e-HRM towards the employee job performance. The problem of this research complies on to explore the impact on e-HRM (electronic human resource management) on employee job performance.

In this study, the main aims of this study are to identify, how employee performance gradually changed with the implementation of cloud-based e-HRM and also to find out how employee performance linked with e-HRM.

Problem of the Study

The problem of this research complies on to explore the impact on e-HRM (electronic human resource management) on employee job performance.

As mentioned earlier, with the development of technology managing human resource becomes a major problem to HR department. However, with the implementation of new cloud-based system managing human resource becomes more effective when comparing to its early stages (Ghosh & Tripathi, 2018).

In here the main aims of this study is to identify, how employee performance gradually changed with the implementation of cloud-based e-HRM and also to find out how employee performance linked with e-HRM. In table 1.1 the evolution of HR technologies towards the cloud-based technology are depicted.

Table 1: Evolution of HR Technologies

Decades	1980s	1990s	2000s	2010s
HR Evolution	Personnel Administration	Human Resource Management	Strategic Human Resource Management	Digital/ Next Generation Smart HRM
HR Technology	Mainframe	Client/Server	Web-based	Cloud –based and mobile technology

Source: Cloud Computing & e-HRM - Ghosh, & Tripathi (2018)

Since this cloud-based e-HRM concept is very new and used only within big companies in Sri Lanka, this will take place on few multi nationals' companies in Sri Lanka. So, this study will conduct to identify the e-HRM practices used in those MNE's and how those practices affect to overall employee job performance. Managing human resource is one of the biggest problems faced by MNEs for last few years. Because unlike robots human can feel & think and based on that qualities human resource is harder to handle. So as a result of that many organizations and HR professionals invested heavily on HRM and with that effort they were able to develop this e-HRM.

With the development and with the support of e-HRM, HR professionals were able to manage their human resource very well. Those professionals linked various HR functions with technology so that they can easily manipulate human resource (Hertel & Schroer, 2008; Stone & Dulebohn, 2013). Hence, throughout this study it will evaluate how e-HRM activities effect on employee overall job performance. However, implementing an e-HRM system is not an easy task because it needs lot of investment. Because of that high initial cost most of the companies in doubt to invest on e-HRM (Ghosh, & Tripathi, 2018). But however, majority of MNEs invest on e-HRM because they believe that perceived benefits are way more than the

perceived cost. So, this study is supposed to identify the why MNEs need e-HRM to manage people and how it will affect to employee job performance. The findings will be helpful to reduce the dilemma of whether to invest or not in e-HRM and to launch proactive actions to eliminate those future employee management problems in the workplace.

Literature Review

E-HRM

The term e-HRM is combination of two words. First 'e' stands for 'electronic' while term HRM can be defined as "the efficient and effective utilization of Human Resources in order to achieve goals of an organization" (Opatha, 1995). So the term e-HRM can be defined as the effective utilization of HR functions via network or internet medium which are aligned with organizations common goals and objectives (Strohmeier, 2009). So with the fast moving technology and evaluation of IT industry HRM is now moving towards more electronic human resource management (Mishra, 2010). There were number of definitions regarding the e-HRM and research studies showed that e-HRM mutually linked with HRIS, Virtual HR (M), Web based HRM and Internet based HRM (Bondarouk & Ruel, 2009).

According to the definitions of Lednick-Hall and Moritz (2003), e-HRM is coordinating HR functions using internet. With this statement many argue that e-HRM is some kind of a supporting service which helps organizations HR administrative process to run it smoothly (Bondarouk & Ruel, 2009). As per Fisher (2010), e-HRM is implementing HR strategies, policies and practices based on web based technology. With the evaluation of HR from personnel administration to digitalization, most of the HR functions are now cloud based Ghosh and Tripathi, (2018). With the digitalization of HRM, HR functions were moved from manual work to internet based (e-based) work. That is where e-HRM was first implement and since then it has offered so many things to the development of HRM as well as employee job performance (Lednick-Hall & Moritz, 2003).

More recently the term e-HRM was referred as an 'umbrella term' which means e-HRM covers the all areas of HRM by integrating with information technology (Bondarouk & Ruel, 2009; Panayotopoulou et al., 2010). When this happens it brings some added value to the HR because all the managers and employees can take decisions with real time information based on e-HRM systems (Rohi, 2017). According to the findings of Gosh and Tripathi (2018), e-HRM is moving towards the cloud based and mobile technology. Also they stated that with the advancement of technology managers and employees can easily access to HRIS and other 'e' related HRM systems through their mobile phones from anywhere in the world. Most importantly it eases the workload of managers while giving more detailed attention to employee job performance.

Employee Performance

According to past literature, employee performance places a vital role in any organization. Organization's overall success rely on its employees' performance; poor employee performance is detrimental to the organization's overall success. According to Perrin's Global Workforce Study (2003), employee performance is employees' willingness and ability to help their company succeed, largely by providing considerable effort on a continuous basis. Furthermore, employee job performance can be distinct as the job related activities expected of an employee and how well those activities were obtained by them (Business Dictionary 2017). Performance is based on quantity of output/outcomes, quality of product, readiness of product, presence or attendance on the job, efficiency of the work completed and effectiveness of work completed (Mathis & Jackson, 2009). According to findings of Thao and Hwand

(2015), employee performance as the successful completion of work allocated to a particular individual or individuals and assessed by a supervisor with pre-defined guidelines and standards while efficient utilization of available resources in dynamic environment.

Relationship between e-HRM and employee job performance

HRM is an all about managing human resource to achieve organizational goals and objectives (Opatha, 1995). Organization goals and objectives are mainly based on employee performance. So, it reveals that there is a direct influence of HRM on employee job performance. As mentioned earlier the main objective of e-HRM is to provide network assistant to conduct HRM process very smoothly. With the time HRM moves from manual HRM to internet based HRM and now the benefits of those e-HRM has been used by employees.

The main objective of implementing an e-HRM system is to improve the overall organization performance (Al-Hmouze, 2016). To achieve that overall organization performance, employees need give their maximum effort to organization. According to the studies of Kumar (2017) he stated that before the implementation of e-HRM system manual HR process seems to be very annoying for both employee and HR department. In that time HR professionals took long time to complete HR administrative work because of the lack of resources. Because of that employees have to spend lot of time in HR department to get their work (Ex – salary issues, attendance issues, over time issues, holiday issues and grievances etc.) done. When employees spend lot of time in their employment related matters it will gradually affect to their job performance and it will directly impact on overall organizations performance (Othman et al, 2017). To overcome those issues in early 1990s e-HRM was introduced and currently most of organizations following this network based system. In present world thanks to e-HRM, most of the organizations are now following e-HRM system to manage their HR process such as e-recruitment, e-training, e-performance management and e-communication etc.

E-recruitment on employee performance

E-recruitment also known as online recruitment is the process of finding suitable candidates to fill available vacancies in an organization via internet (Epstein, 2003). Normally different companies use different techniques to attract employees to their organizations. Nowadays many organizations use recruitment websites, social media and online ads to publish their recruitment advertisements (Dhamija, 2012). In past most of the companies used posters, banners, leaflets and paper advertisements to post their jobs. Even though organizations received CVs it took long time to receive those CVs. However, with the implementation of e-recruitment organizations instantly received CVs via email. Thus, HR professionals can work with more efficient while job candidates can send their CVs without wasting any time. Also according to the Dhamija (2012) e-recruitment and analyze candidate's profiles via internet and can shortlist them according to the wish of organization. Thanks to network based recruitment organizations can easily attract candidates with minimum effort and it will indirectly improve the performance of employees.

According to the Parry and Tyson (2008), e-recruitment attracts important human resources to the organization. Also they stated that with that attraction of quality human capital, organizations will be able to improve their performance while improving their employee job performance. Ramaabaanu and Saranya (2014), stated the importance and disadvantages of using e-recruitment. However, in their study they stated that that e-recruitment has more advantages than disadvantages and that is why most of the organizations still sticking to e-recruitment sources. Thus, based on those findings the author has developed a hypothesis.

H1: E-recruitment has a positive impact on employee job performance.

E-training on employee performance

The main focus of training is to help employees to develop their skills which are needed to perform specific tasks Goldstein and Ford (2002). E-training does this in an online environment. Speeches, demonstrations, videos, text documents, and other materials can be used as e-training methods. E-training is a very useful method of providing training for employees. Employees who are living in abroad can easily participate for a training program via Skype or other social network. Thanks to e-training employees don't want travel for lecture halls or training class rooms. They can easily participate for training program via their smartphones and laptop. Because of those facilities employees can save lot of precious time and it will impact on their performance too (Arsovski, Stefanovic & Arsovski, 2015).

According to the studies of Adli et al. (2014), they found that to gain better employee job performance organizations need to improve the Knowledge, Skills and Attitudes (KSA) of their employees. Also, Adli et al. (2014), stated that investing in human capital is a long term investment and with the time organizations will be able to gain those benefits. Since the birth of internet investments in distance learning which is also known as e-learning improves rapidly because many believes that e-training improves the overall employee job performance. Therefore, based on these background information, the researcher has developed a hypothesis by considering this specific relationship. The developed hypothesis interprets that e- training has a significant relationship with employee performance.

H2: E-training has a positive impact on employee job performance.

E-performance management on employee performance

E-performance management can be defined as a web-based tool, which designed to measure the employee performance (Ravisha & Pakkeerappa, 2015). Because of e-performance management managers can easily conduct performance appraisals of employees. With the use of e-performance management systems organizations can capture employee performance and when it comes to performance evaluation organizations can use e-performance management system to evaluate employee performance. It is true that having a good performance management system improve organizational performance by managing the performance of teams and individuals (Ravisha & Pakkeerappa, 2015). Thanks to e-performance management organizations now can correctly and accurately measure the performance of employees. According to Caligiuri (2000), e-performance management is kind of competency based reward system. The one who have more competencies will be rewarded more and because of that employees will encourage to improve their performance to get more rewards.

Ravisha and Pakkeerappa (2015), stated e-performance management as tool which helps organizations to improve their employee job performance. Their study shows that with the use of e-performance management organizations now can track their employees work and also remotely monitor their employee performance. This step has a significant impact on employee performance because this e-performance management system not only measures the employee performance it measures the employee knowledge and skills too (Cooper & Schindler, 2005). E-performance management has its' upwards and downwards but most importantly it has a significant influence on employee performance (Ravisha & Pakkeerappa, 2015). Based on this argument the researcher has come up with the below hypothesis by combining e-performance management and employee performance.

H3: E-performance management has a positive impact on employee job performance.

E-communication on employee performance

E-communication can be defined as a system used to send or retrieve messages through computer or Internet connections (Engsbo & Sandhu, 2007). With the development of technology communication becomes an important aspect in every organization. As per the findings of Engsbo and Sandhu (2007), today most of the organizations use different kinds of communication tools ranging from simple e-mails to more complex electronic document management (EDM) systems and enterprise resource planning (ERP). With the use of these e-communication methods employees can now easily and quickly share their information with each other. To get instant feedback and real time information employees can use these e-communication methods. As long as employees use these e-communication methods it will improve the overall organization performance while improving the employee performance and because of that reason e-communication regarded as one of the important aspect of modern business (Raulea & Raulea, 2014).

As stated by Lutgen (2010), e-communication has a significant impact on organizational performance as well as employee performance. Also he stated the importance of having a proper communication throughout the organizations to reduce the communication bias. Mehedi (2103), specified the link between e-communication with organizational performance and how it will improve employee job performance while reducing the communication bias among the management and employees. Based on literature and findings the researcher has developed a hypothesis by considering the two variables e-communication and employee performance.

H4: E-communication has a positive impact on employee job performance.

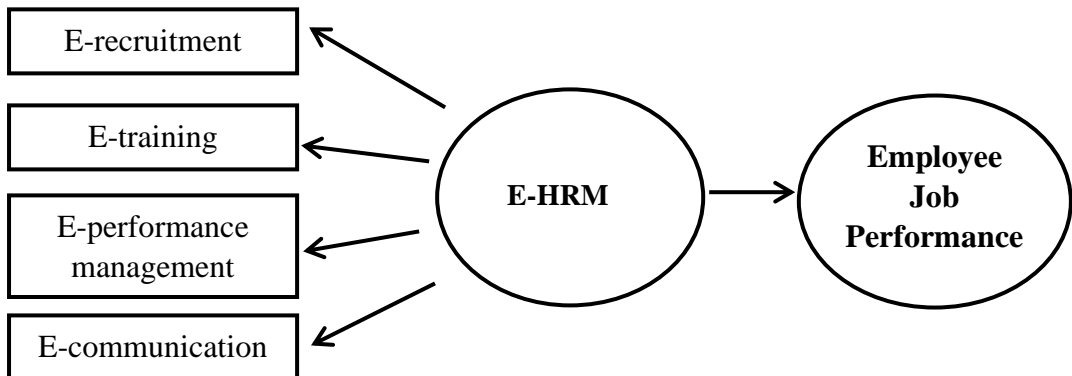
Conceptualization and Operationalization

A conceptual framework is a structure which the researcher believes can best explain the natural progression of the phenomenon to be studied (Camp, 2001). It is linked with the concepts, empirical research and important theories used in promoting and systemizing the knowledge espoused by the researcher (Peshkin, 1993).

Collected literature shows that how e-HRM positively or negatively effect to employee job performance in an organization. Throughout this study the main concern is to identify how independent variable impact on dependent variable so based on that conceptual framework was created and it is depicted in Figure 01

E-HRM stands as independent variable while employee performance stands as dependent variable (Refer Figure 3.1). According to Adli et al. (2014) E-HRM consists with E-recruitment, E-training, E-performance management & E-communication and it is well illustrated in Figure 01.

The conceptual framework of this study can be illustrated as follows,

Figure 01: Conceptual Framework

Source: Literature Review

Methodology

Research Design, Population and the Unit of Analysis

The study falls in to positivism paradigm and it is a cross sectional study. Further the study is a quantitative study and throughout this study deductive approach was used due to the descriptive purpose of this research study (Cleveland et al., 2009). This is because the researcher intentions to identify the impact of e-HRM practices on employees' job performance in selected Multi National Entities in Colombo district. Two variables, which are considered to be important in the e-HRM practices of MNE's in Colombo District, have been identified as possible contributing factors. The objective is to establish the relationship between these independent variables and the dependent variable, which is employee job performance. The available evidence suggests that the unit of the study is individual: employees of the selected multi-national entities in Colombo District.

Sampling Technique and Sampling Size

A population can be defined as the sum of all the elements, sharing certain characteristics and from which a sample can be drawn and a population can consist of individuals as well as organizations and products (Malhotra & Birks, 2003). According to Sekaran (1992), population can be identified in two ways, as target population and accessible population. However, in this research study the target population is used to collect data from employees of multi-national entities in Colombo District.

As per Bryman and Bell (2011), either researcher can collect data or information from the whole population is an interest or from the part of the population which is generally representing the whole population. Sample is a sub group of subjects drawn from the population for the purpose of collecting data and information and to draw conclusion based on them (Malhotra & Birks, 2003). From the population of 250 employees 152 employees have selected as the sample of the data collection using Krejcie & Morgan (1970), and the simple random sampling method was used to select the employees in the sample. These 152 employees represent few large scale multi-national entities' head offices which located in Colombo District

Data Collection

Data was collected using a questionnaire and it was chosen to collect data for the number of reasons peculiar to this study. It is not possible to meet the respondents individually since they are busy with tight schedules. Therefore, the questionnaire was found to be more suitable way of collect information from the respondents. The anonymity of the respondents is considered very crucial. As described in chapter three the research consists of one independent variable and one dependent variable. The questionnaire consists with questions to measure those variables.

The questionnaire for measuring e-HRM practices was developed based on the questionnaire of Adil et al. (2014) and that questionnaire was used because of lack of timeframe available to conduct this research study. This questionnaire contains 16 statements in order to measure various aspects of e-HRM practices. The questionnaire for measuring employee job performance was developed by the author. It consists with 16 statements which used to measure employees' job performance of large scale multinational entities in Colombo District.

Data Presentation and Analysis

Reliability

Reliability test of the study examine the extent to which a scale yields consistent results, if repeated measurements are made on the same characteristic. Reliability can further have explained as the extent to which measures are free from random errors (Malhotra et al., 2017). A respondent should respond same score in questionnaire if they complete it at two different times and it state as "test-re-test reliability" which is costly and time consuming. Because of those constraints test-re-test reliability was not examined and internal consistency test was carried out.

Internal consistency reliability is used to assess the reliability of a summated scale where several items are summed to form a total score ((Malhotra et al., 2017). Each item of a scale measures some aspect of the construct measured and the items should be consistent in what they indicate about the construct. According to the standard, less than 0.7 Cronbach's Alpha value indicates unsatisfactory internal consistency reliability.

Table 2: Scale Reliabilities

Variables	Cronbach's Alpha Value Standard 0.7<
E –recruitment	0.906
E – training	0.808
E – performance management	0.785
E – communication	0.762

Source: Survey data (2018)

According to Table 5.1 Cronbach's Alpha value for E –recruitment, E – training, E – performance management and E - communication are respectively 0.906, 0.808, 0.785 and 0.762. As the Table 5.1 represent Cronbach's Alpha value of E –recruitment, E – training, E – performance management and E - communication were greater than 0.7. Thus, it emphasizes the reliability of the above variables' scales are high and items are reliable.

Demographic Data

Table 3: Demographic Statistics

Description	Total	Percentage
Gender		
Female	79	52%
Male	73	48%
Age		
20-25 years	27	18%
26-30 years	96	63%
31-35 years	19	13%
36-40 year	8	5%
41 years and above	2	1%
Education Level		
Undergraduate	64	42%
Completed the first degree	59	39%
Passed G.C.E Advanced Level	11	7%
Following post graduate degree	18	12%
Years of service in the current Organization		
less than 5 years	127	84%
5-10 years	14	9%
11-15 years	6	4%
more than 15 years	5	3%

Source: Survey Data 2018

According to the table 5.2, majority of the respondents are females and more than 60% of the respondents falls in to the age category of 26-30 years. 82% of the respondents were undergraduates and first degree holders while 84% of the respondents were working less than 5 years in the current organization.

Descriptive Statistics

Table 02 below gives details about the descriptive statistics of the independent and the dependent variables.

Table 4: Descriptive Statistics of the Variables

Variable	Mean	SD	Skewness	Kurtosis
e-HRM	3.8261	.35493	.482	.771
E Recruitment	3.8651	.66293	-.148	.819
E Training	4.0211	.42825	-.545	1.908
E Performance Mgt	3.3860	.70955	-.364	-.389
E Communication	3.8734	.67230	-.424	-.743
Job Performance	3.9128	.36868	.942	.942

Source: Survey (2018)

According to the table 5.3, the mean of all the variables except E Training records below 4.00 and standard deviation also falls below 1.00 for all variables. It is clearly visible that skewness and kurtosis of E Training is quite higher than all other variables, showing the characteristics of a negatively skewed peaked distribution. All other variables generally can be explained as normally distributed because both skewness and kurtosis falls below 1.00.

Hypothesis Testing

Hypothesis testing was conducted using multiple regression analysis and the results are explained in detailed below. There are five hypotheses developed under the conceptualization section which will be tested below.

Correlation Results

Table 5: Model Statistics

Item	Value
Pearson Correlation	0.553
Sig	0.000

Source: Survey (2018)

The table 5.4 shows that positively moderate correlation ($.7 > r > .5$) between e-HRM and employee job performance in selected multinational entities in Colombo District.

Table 6: Correlation Results

Variable	Correlation Coefficients
E-recruitment	0.526
E-training	0.128
E-performance	0.333
E-communication	0.444

According to table 5.5, sig value is less than the 0.005 ($P < 0.005$), hence it is proven that all the variables, E-recruitment, E-training, E-performance and E-communication have a positive impact on employee job performance in multinational entities in Colombo District.

Discussion, Conclusions and Recommendations

Discussion on Findings

The study examines the relevant factors of employee job performance through reviewing the literature and it was found that e-HRM practices are one of the foremost cause which determines the level of employee job performance. Then by constituting a questionnaire for measuring e-HRM practices was developed based on the questionnaire of Adil et al. (2014), and the questionnaire for measuring employee job performance was developed by the author. Data was collected and analyzed with the purpose of revealing the impact and the relationship between e-HRM practices on employee job performance in selected multinational entities in Colombo District.

As per the results of the factor analysis it was evident that there is a positive relationship between e-HRM practices and employee job performance in those selected multinational entities in Colombo District. The correlation between these two variables (independent and dependent) was 0.553, which are significant at 0.000 level. This correlation was found to be moderate as it is more than the lower bound of correlation which is 0.5.

According to the results of simple regression analysis, e-HRM practices were found to have a positive impact on employee job performance with the strength of b value of 0.575. The value of adjusted R square is 0.306, indicating that job performance is explained by 30.6% through the variation of e-HRM practices. All the dimensions of e-HRM practices are positively related on employee job performance but only e-recruitment, e-performance management and e-communication has a positive impact on employee job performance. Furthermore, when discussing the level of job performance of the multinational entities employees' in the sample, it was found that they have a high level of job performance with the mean value of 3.9128. Accordingly, it was found that the employees in those selected multinational entities in Colombo District were highly performing their jobs. And also the level of e-HRM practices of the sample is high with the mean value of 3.8261.

The primary objective of this study is to identify the impact of e-HRM practices on employee job performance in selected multinational entities in Colombo District. Other than this primary objective, to identify the impact of e-recruitment on employee job performance, to identify the impact of e-training on employee job performance, to identify the impact of e-performance management on employee job performance and to identify the impact of e-communication on employee job performance.

It is true that human resource is the most valuable and most influencing factor in and organization. So these findings suggest the importance of having sound e-HRM practices in an organization to have high performing workforce.

The main objective this study is to identify the impact of e-HRM practices on employee job performance in selected multinational entities in Colombo District. According to the results of simple regression analysis, e-HRM practices were found to have a positive impact on employee job performance with the strength of b value of 0.575. According to Crossman & Abou (2003), this value can be accepted. The value of adjusted R square is 0.306, indicating that job performance is explained by 30.6% through the variation of e-HRM practices. And it can be conclude that there is a positive impact on e-HRM practices on employee job performance in those selected multinational entities.

It is also found that the variables: (1) e-recruitment, (2) e-training, (3) e-performance management and (4) e-communication have a positive impact on job performance respectively. (use more references in discussion. This part need more improvement. Discuss your findings with other authors findings)

Since the sub heading is “Discussion, Conclusions and Recommendations” add a conclusion para

Recommendations, Implications and Further Studies

Another ideology of this study is to recommend better e-HRM practices in order to improve employee performance in multinational entities. According to the literature done by previous scholars and by the understanding of the practicality of e-HRM, it can be listed following suggestions to further improve the e-HRM practices in multinational entities

- Make sure that everyone knows and aware about the e-HRM practices in the organization.
- When recruiting employees to the HR department it is better to recruit employees who are aware of the e-HRM.
- Give appropriate training to their employees on how function e-HRM practices.
- Create a working environment which encourages employees to move with the new technological changes.
- Develop policies and procedures on e-HRM functions.
- Having a team of technical experts in case emergency HR system failure
- Encourage employees to use HRIS when taking leaves and review their performance feed backs. Don't use bullet points. Use numbers

By using these recommendations HR department will able to use their HR process smoothly by improving the organizational performance as well as employee job performance. According to Opatha (2012), the strategic aspect of HRM is to gain competitive advantage over other organizations. The competitive advantage gain over HRM can sustain for long period of time because those practices are intangible and other organizations won't be able imitate them easily. From organizational point of view organizations needs to move with those new trends in HRM in order to survive in this competitive business world.

This study offers managerial implications that may be useful to the HR department, especially for the ones who are responsible to take HR related decisions in the organizations. Data was collected from and above employees in those multinational entities in Colombo District. So as the author believes that these information are very valuable because it contained the opinions of and above employees who directly involved with managerial processes in the organizations. Research outcomes can be used to identify the importance of e-HRM to improve employee job performance as well as competitive advantage which can gain via e-HRM in order to survive in the industry. Also these findings can be taken to predict the new trends in HRM and the opinions of employees towards those new trends in HRM. Especially managers can predict the training needs of employees by reviewing the results of this study. Managerial employees like board of directors, general managers and assistant general managers, HR managers and head of the departments can use these research findings to plan their future business plan in those respective organizations. It is true that the integration with technology will ultimately improve the effectiveness of HRM. But as the managers and other respective decision makers when they are using those technologies to improve employee performance they need keep on their mind that they are dealing with the most valuable resource in the organization. Unlike robots human have their own feelings and sometimes when they working with these newly implemented HR and other related systems they might

get frustrated. To resolve those frustrations managers and other respective decision makers must have a tradeoff between technology usage and human touch. Human touch can bring world of good to those underperforming employees so that they will also not be reluctant for the new technological changes. So as the author my final recommendation for HR professionals is to use new technological advancement as much as can, but never forget the traditional human touch which is priceless.

The major limitation of this study is, due to the limited time frame, this study was conducted as a cross sectional study and used a quantitative approach. It is better to use qualitative approach to reveal the impact on employee job performance from e-HRM practices. Also the sample is selected only from selected multinational entities in Colombo District and hence the generalization of the findings to the other managerial employees is limited. Another limitation when giving ratings to the level of e-HRM practices, there is a tendency to give false ratings due to their lack of knowledge on e-HRM.

For further researches, the researcher proposes a study to be conducted on how digitalization of HRM impact positively on organizational performance as well as employee job performance. Also researcher would like to recommend a study to be conducted on how electronic training and development impact on employee job performance because here in this research model researcher has to omit that e-training dimension due to lack of statistical evidence. So if anyone who is wishing to conduct new research on these areas, researcher believes that these are the new emergent areas of HRM.

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The Impact of Brand Equity on Customer Brand Preference & Purchase Intention: With Special Reference to Automobile Industry in Sri Lanka

Silva A. R. N.¹ and Fernando P. M. P.²

Automobile industry in Sri Lanka has experienced a rapid growth during the last two decades earning a strong market position as a major commercial activity. Due to the high competition, players of the industry, comprised of major automobile marketers as well as small to medium dealers, who are operating carefully planned marketing strategies to capture the consumers. Here, brand related prominence of the automobiles is mainly used in selling the vehicles. The power of the brand is about the portrait of the brand, its consumers have in mind, 'brand equity' is a major factor that leads the consumer to consider an automobile brand as a preferred selection. Considering this scenario, this research is investigating the impact of brand equity on customer brand preference and the purchase intention within the automobile industry in Sri Lanka. Building upon the prior research of Aaker (1996)'s brand equity dimensions were used as the base to measure the brand equity. The research explored how the brand equity leads to the brand preference of the consumers and then their future purchase intentions in selecting an automobile brand. A survey-based research strategy in a cross-sectional research design was used to gather primary data from 200 automobile users within the Western Province of Sri Lanka. The findings revealed a positive relationship between brand equity and purchase intention which is mediated by the brand preference. The automobile brands marketers in Sri Lanka should aim their marketing strategies to uplift the brand awareness, brand association, perceived quality and brand loyalty of the related brands in uplifting the preferences towards the brands among consumers as well as to increase the customer purchase intentions.

Keywords: *Automobiles, Brand Equity, Brand Preference, Purchase Intention*

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¹Department of Marketing Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka. (rnadeeshansilva@gmail.com).

²Department of Marketing Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka. (madhuri@kln.ac.lk).

Introduction

Automobile business is amongst the fastest growing business in Sri Lanka with a high market competition. The market growth is evident through the steady increase of automobile registration within the years of 2014 to 2018, with 2018 recording a total registration of 80,776 automobiles in Sri Lanka (Department of Census and Statistics, 2018; tradingeconomics.com). The Sri Lankan automobile market is populated with a large number of imported vehicles which are originated from East Asia, Europe, United States and India. Consumer demand for vehicles are driven by the consumers' perceptions on automobile brand values and the perceived benefits associated with the brands. Within this background, a thorough understanding of the key success factors on the choice of the automobile brand may help marketers to sustain their brands within the Sri Lankan market.

As per the extant literature, it is evident that consumers like to purchase brands that provide them with unique values and differentiated features (Aaker, 1991). Within the customer perceptions on brands and associated values, brand equity is closely interlined to the brand name and its power as well as the subsequent benefits it offers to the user (Delassus & Descotes, 2012; Stahl, Heitmann, Lehmann, & Neslin, 2012) and can be placed as a key success factor on automobile choices. All marketing efforts taken by the marketer and intermediaries impact either positively or negatively in managing the brand equity of the product in concern (Keller, 1993). The power of a brand leads to greater credibility and trust towards a brand (Lassar, Mittal, & Sharma, 1995) by aiding in the reduction of the risks associated with purchasing products with higher monetary value like automobiles (Kim & Kim, 2004). Further, strong brands results in developing higher consumer preference for brands in a market (Datta, Ailawadi, & Van Heerde, 2017).

The anecdotal evidences show that a majority of consumers in Sri Lanka prefer to buy known automobile brands irrespective of the lower priced brands which are populated in the market indicating the credibility of brand equity in action. The higher power of the established brands has taken greater efforts from marketers in introducing and subsequent consumer adoption of new car brands to the Sri Lankan market. The power of the established brand names is used by automobile marketers in introducing brand extensions (Pitta & Prevel, 1995) to capture various income and life style categories of consumers and is used as the preferred option of introducing new products to markets like Sri Lanka. At the same time, brand equity results in continuous store traffic as well as increasing the store image (Cobb-Walgren, Ruble, & Donthu, 1995) which is important to all the vehicle vendors in carrying popular brand names in their outlets. Brand equity also contributes to the marketing productivity of an organization (Cai, Zhao, & He, 2015) and can be used to evaluate the performance of brands in terms of the value, customers place on them. So apart from the value to the firm, brand equity of a product provides value to the customer through contributing to processing brand-related information as well as building confidence and satisfaction towards the product also (Aaker, 1991; Washburn & Plank, 2002). However, the majority of the literature explores these relationships from the developed country point of view and findings from the context of a developing country, is limited (De Silva, Seeley, Ongsakul, & Ahmed, 2020; Narteh, Odoom, Braimah, & Buame, 2012; Sedzro, Amewu, Darko, Nortey, & Dasah, 2014). From the Sri Lankan context, De Silva et al. (2020) has explored the impact of 'brand consciousness' and 'brand love' among other variables on automobiles purchase intention of consumers. However, the role of brand equity in the purchase intention of automobiles, within the context of Sri Lanka, is scant. With this outset, exploring how brand equity components act as antecedents to the purchase intention of automobiles in the Sri Lankan market would be an interesting addition to the literature as well as of greater importance to market practitioners. Also, the current literature has shown that apart from the purchase intention, brand preference

is also playing the role of a consequence of brand equity (Chang & Liu, 2009; Cobb-Walgren et al., 1995). Taking this into consideration, authors are aiming to investigate the extent of the impact of brand equity on the customer purchase intention of automobiles in Sri Lanka, by especially considering the mediation effect of the brand preference within the above relationship.

Literature Review

Brand Equity

American Marketing Association (AMA) defines a brand as “a name, term, design, symbol or any other feature that identifies one seller’s good or service as distinct from those of other sellers” (AMA, 2014). However, the literature also shows that the brands have evolved beyond this definition into much more, associated with meanings and associations (Conejo & Wooliscroft, 2014). Brands reach beyond the physical components of differentiating the products and have cognitive to emotional attributes and associations in adding further value to consumers (De Chernatony, 2010). Brand equity is born out of the results of the marketing efforts of a firm (Keller, 1993) and can be defined as “a set of brand assets and liabilities linked to a brand, its name and symbol, that add to or subtract from the value provided by a product or service to a firm and/or to that firm’s customers (Aaker, 1991, p. 15). Yoo and Donthu (2001, p. 1) has defined brand equity as the “value added to a product by its brand name”. However, Aaker’s definition has been considered as one of the more comprehensive definitions to describe brand equity (Buil, de Chernatony, & Martínez, 2008).

Brand equity measurements have been carried out using both multi-dimensional component-based models as well as using holistic models (Tolba & Hassan, 2009) by various authors (Aaker, 1996; Keller, 1993; Park & Srinivasan, 1994). Out of these, Aaker’s (1991) and Keller’s (1993) brand equity models had been used extensively to explore brand equity of both products and services. Aaker (1991) explored brand equity as a component-based model based on cognitive psychology where he proposed five categories of brand assets that upgrade the value of a product through the changing consumer perception and evaluation of brands. These five constructs of brand equity included brand awareness, brand perceived quality, brand associations, brand loyalty, and other proprietary brands assets (including patents, trademarks, and channel relationships). However, most research has dropped the fifth dimension due to its attachment to the company than the customers (Buil et al., 2008; Kim, Kim, & An, 2003; Pappu, Quester, & Cooksey, 2005; Washburn & Plank, 2002; Yoo & Donthu, 1997). Keller (1993) also proposed an alternative component-based model for his customer-based brand equity where he used brand knowledge and brand response as constructs of brand equity. Although these two prominent models are exploring brand equity using different dimensions, both are using consumers’ memory-based associations in identifying what brands are for consumers (Pappu et al., 2005).

Aaker’s brand equity model (1991, 1996) has gained much attention within the brand equity related literature due to its integration of both attitudinal and behavioral elements in the measurements and is highlighted in terms of its ability in contributing to managerial insights (Kashif, Fernando, Samad, & Thurasamy, 2018). Following these justifications, the authors adopted the four main dimensions from Aaker’s brand equity model for the current study. However, in terms of capturing the measurable criteria for brand equity, various researchers (Netemeyer et al., 2004; Pappu et al., 2005; Washburn & Plank, 2002; Yoo & Donthu, 2001) have used Keller’s (1993) explanations of brand equity and have taken related dimensions also into consideration as well. The following section extends the dimensions of brand equity that has been utilized in the study.

- Brand awareness: This is “the ability for a buyer to recognise or recall that a brand is a member of a certain product category” (Aaker, 1991, p. 61) and highlights how strongly the brand is positioned in the consumers’ mind (Pappu et al., 2005). Brand awareness is a function of consumer exposure to the brand and the efforts from the firm in marketing the brand within the target market. As per Keller (2009), the customers’ awareness as well as the familiarity of the brand and related associations contribute in developing the consumer-based brand equity of a product. Further, Keller (1993) conceptualized brand awareness through brand recognition and brand recall in order to capture both awareness and familiarity that a consumer may have towards the brand.
- Perceived quality: Aaker (1991) captured the perceived quality of a brand as the perceived superiority the customers place on the product in meeting the intended purpose against its alternatives. This meets the definition of Zeithaml (1988, p. 3) where she illustrates the perceived quality as “the consumer’s judgment about a product’s overall excellence or superiority”. Aaker (1991) further differentiated perceived quality from satisfaction stating that a customer with low expectations on a product can still achieve satisfaction.
- Brand association: As per Aaker (1991, p. 109), brand associations capture all the linkages that connect with the “memory of the brand” in a consumer. Associations can vary in strength or in their uniqueness also (Keller, 1993). Aaker (1991) explained that brand associations are all linkages that exist between a brand and products which enhance the impressions of a particular brand. Aaker (1996) further identified brand associations related to the product, personality and organisation. These associations would act as a reason for potential customers to think favorably on a brand. Also, the customer experiences with the brand can lead to negative and positive associations with a brand (Keller, 2013).
- Brand loyalty: Aaker (1991, p. 39) saw brand loyalty as the “attachment that a customer has to a brand”. This is related to Oliver (1997, p. 392)’s definition of brand loyalty as “a deeply held commitment to rebuy or re-patronize a preferred product or service consistently in the future, despite situational influences and marketing efforts having potential to cause switching behavior”. Pappu et al. (2005) argues that Oliver’s definition is demonstrating the behavioural dimension of brand loyalty, and apart from this, an attitudinal perspective can be used to measure the loyalty of a product within the consumers. This was captured by Yoo and Donthu (2001, p. 3), where they discussed brand loyalty as “the tendency to be loyal to a focal brand, which is demonstrated by the intention to buy the brand as a primary choice”. Buil et al. (2008) also differentiated between the behavioural and attitudinal perspectives of brand loyalty where repeat purchasing behaviour and commitment towards the brand was highlighted to indicate the respective differences. Following the direction of Yoo and Donthu (2001) and Buil et al. (2008), this research also adapted the attitudinal perspective of brand loyalty which in essence captures the loyalty of a consumer to the brand in consideration.

The above multi-dimensional approach would be taken to measure the brand equity in this research following the directions taken by a multitude of other researchers (Buil et al., 2008; Chen & Chang, 2008; Yoo & Donthu, 1997, 2001). The extant literature has found that brand equity can increase consumer preferences on brands as well as purchase intentions (Chang &

Liu, 2009; Chen & Chang, 2008; Cobb-Walgren et al., 1995).

Brand Preference and Purchase Intention

Chang and Liu (2009, p. 1690) defined brand preference as “the bias a customer holds toward a particular brand”. As per Hellier, Geursen, Carr, and Rickard (2003, p. 1765), brand preference is “the extent to which the customer favours the designated service provided by his or her present company, in comparison to the designated service provided by other companies in his or her consideration set”. Even as early as the early 1950s, Banks (1950) identified brand preference as a good predictor of purchase of a product or a service. The literature further reveals the differences in the approaches taken by various authors in explaining the relationship between brand preference and brand equity. Among these, brand preference has been conceptualised as an antecedent to brand equity (Keller, 2013) as well as a consequence to brand equity (Chang & Liu, 2009; Chen & Chang, 2008; Cobb-Walgren et al., 1995). This research study has taken brand preference as a consequence of brand equity. ‘Purchase intention’ is the plans the customers have on buying a specific brand for their future purchases (Chang & Liu, 2009). These represent the psychological acts in relation to an individual’s behaviour according to the products (Wang & Yang, 2008). There are researches which have highlighted purchase intention as an accurate predictor of purchase behaviour (Pecotich, Pressley, & Roth, 1996).

Hypothesis Development

Effect of brand equity on purchase intention

The relationship between brand equity and purchase intention has been tested in relation to high risks service categories (hotels) to low risk product categories (household cleansers) taking the advertising expenditure on building brand equity into consideration (Cobb-Walgren et al., 1995). Also, there are empirical evidences on the relationship between brand equity and purchase intention from service brands (Chang & Liu, 2009; Chen & Chang, 2008) to product brands (Buil, Martínez, & de Chernatony, 2013; Parkvithee & Miranda, 2012) including the automotive market (Buil et al., 2013; Tolba & Hassan, 2009). Using these literature evidences, this study hypothesised that;

H1: There is a significant positive impact from brand equity on the customer purchase intention of automobiles in Sri Lanka

Effect of brand equity on brand preference

As per extant literature, higher brand equity is positively correlated with consumer brand preferences (Cobb-Walgren et al., 1995). Consumers respond more positively to the marketing activities of the known brands (Hoeffler & Keller, 2003), and this would be demonstrated in their brand perception, preference and behaviour towards the brand. The stronger brands lead to favourable brand evaluations from consumers which contribute to higher overall preference (Hoeffler & Keller, 2003). There are empirical evidences to show the relationship between brand equity and brand preference (Chang & Liu, 2009; Chen & Chang, 2008; Cobb-Walgren et al., 1995; Myers, 2003) within both products and service sectors. Thus, we hypothesise that;

H2: There is a significant positive impact from brand equity on the customer brand preference of automobiles in Sri Lanka

Effect of brand preference on purchase intention

Brand preference demonstrates “a liking or overall rating of a brand compared to other brands in a consumer’s evoked set” (O’Cass & Lim, 2002, p. 48) and is different from the purchase decision where the person’s future preference to buy a brand. As per the Theory of Reasoned Action (Ajzen & Fishbein, 1977), favourable attitudes towards brands can lead consumers to purchase the brands (Buil et al., 2013). This favourability towards a specific brand (Chang & Liu, 2009) is demonstrating the favourable attitudes consumers hold towards the brands also. The direct relationship between brand preference and purchase intention has also been tested by researchers to explore the relationship between the two variables and thus the following hypothesis has been suggested for this study.

H3: There is a significant positive impact from customer brand preference on the customer purchase intention of automobiles in Sri Lanka

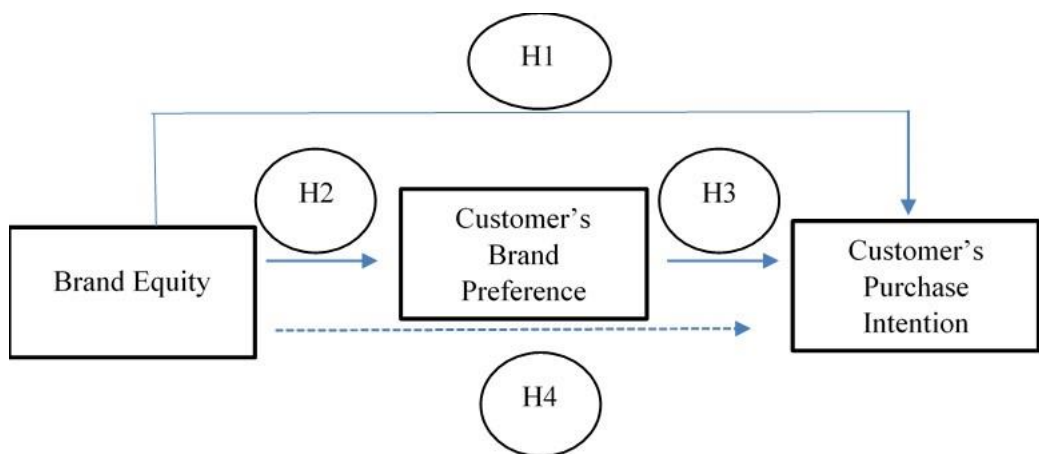
Mediation effect of brand preference on the relationship between brand equity and purchase intention

This research study is focusing on the brand preferences as a mediator in the ultimate relationship between brand equity and purchase intention. As per O’Cass and Lim (2002), this focus is theoretically as well as managerially valid for the automobile market. The extant literature has shown that the brands with higher brand equity tend to generate brand preferences among customers which is leading towards willingness to purchase the same brand (Chang & Liu, 2009; Cobb-Walgren et al., 1995). These show the rationality of using brand preference as a mediator between brand equity and purchase intention which was taken as a hypothesis under this study.

H4: The relationship between brand equity and customer purchase intention of automobiles is mediated by customer brand preference.

Based on these, the following conceptual model has been developed based on Aaker’s brand equity dimension model (Aaker, 1991, 1996). Researchers considered the brand preference as the mediator variable and purchase intention as the dependent variable which is impacted by the multi-dimensional brand equity measurements.

Figure 1: Conceptual Framework



Methods

Research Design and Sample Profile

Authors used a single cross-sectional study design as the main research design of the study. Interviewer-completed questionnaire was used as the survey instrument to gather primary data from 200 car owners from the Western Province of Sri Lanka. The survey was conducted personally by the first author and a trained interviewer at selected car parks in the main cities of the Western Province. The interviewers randomly approached and intercepted the car owners and explained to them the objectives of the study and the confidentiality of the information and then obtained their consent for data collection. The questionnaire was pre-tested before the full survey with a smaller sample using the same methodology used for the final survey.

As shown in the Table 1, the sample consisted of a higher proportion of male respondents (149: 74.5%) than the female respondents (51: 25.5%). From the age categories, the range between 31-40 years old (87: 43.5%) represented mostly in the sample was followed by above 41 year old car owners (75: 37.5%). The majority of the respondents' income ranged between LKR 100,001-150,000 (24.5%), followed by more than LKR 200,000 (23%). Furthermore, over 31.5% of the respondents were diploma or professional qualification holders, 23% were graduates, 19.5% were postgraduate respondents. Also, 55% of the sample falls within the private sector employees while 25% government sector employees and 20% entrepreneurs were also included in the sample.

Table 1: Sample Profile

Demographic Variable	Description	Frequency	Total
Gender	Male	149	200
	Female	51	
Income level	below Rs. 30,000	5	200
	Rs. 30,001-Rs. 60,000	27	
	Rs. 60,001-Rs. 100,000	37	
	Rs. 100,001-Rs. 150,000	49	
	Rs. 150,001-Rs. 200,000	36	
	above Rs. 200,000	46	
Educational Level	Ordinary Level	4	200
	Advanced Level	23	
	Diploma/ Professional courses	63	
	Bachelor's Degree	46	
	Postgraduate (MBA/ MSc)	39	
	Others	25	
Occupational level	Managers, Senior officials	63	200

	Professionals	37	
	Executives	47	
	Clerk, & clerical support workers	6	
	Service & sales workers	5	
	self employed	42	
Occupied for	Private Sector	110	200
	Government Sector	50	
	Self-Employment/ Business	40	
Age	Below 25	8	200
	26-30	30	
	31-40	87	
	Above 41	75	

Measures

The multidimensional brand equity models by Yoo and Donthu (2001) and Buil et al. (2008) were adopted to measure the brand equity of this research. Three items each were drawn and adapted from these two scales to measure brand awareness, perceived quality, brand association and brand loyalty. Brand preference was measured using three items and purchase intention was measured using two items, adapted from Chang and Liu (2009). All items were measured using a five-point Likert scale that ranged from 1 (strongly disagree) to 5 (strongly agree).

Findings of the Study

Reliability Analysis

According to the Table 2, the Cronbach's Alpha values of all the measured variables are greater than 0.7 (Sekaran, 2009) indicating that the variables are reliable and acceptable.

Table 2: Cronbach's Alpha

Variables	Cronbach's Alpha	N of Items
Brand Awareness	.863	3
Brand Association	.908	3
Perceived Quality	.936	3
Brand Loyalty	.753	3
Brand Preference	.905	3
Purchase Intentions	.902	2

Correlation Analysis

According to the findings (Table 3), Pearson correlation between brand equity vs customer purchase intention is .839** which was found to be significant at the 0.01 level (2-tailed). This shows the positive relationship between the variables. Also, a significant relationship exists between customer brand preference vs customer purchase intention as the correlation co-efficient was recorded at .832**.

Table 3: Correlation Analysis Results

Correlations				
		AVGBE	AVGBP	AVGPI
AVGBE	Pearson Correlation	1	.906**	.839**
	Sig. (2-tailed)		.000	.000
	N	200	200	200
AVGBP	Pearson Correlation	.906**	1	.832**
	Sig. (2-tailed)	.000		.000
	N	200	200	200
AVGPI	Pearson Correlation	.839**	.832**	1
	Sig. (2-tailed)	.000	.000	
	N	200	200	200
**. Correlation is significant at the 0.01 level (2-tailed)				

As per Cook, Campbell, and Day (1979), both variables are showing a strong positive correlation indicating a positive change in brand equity and brand preference which leads to the increase in consumer purchase intention.

Hypothesis Testing

The H1, H2 and H3 have been tested by the usage of linear regression. All three hypothesis were accepted based on the results which are indicated on Table 4-7. The direct relationship between brand equity and purchase intention recorded R value of .839, (Table 4) brand equity and brand preference recorded R value of .906 (Table 5) and R value of .832 was recorded (Table 6) between brand preference and customer purchase intention.

Table 4: Coefficients Table - Brand Equity and Purchase Intention

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.494	.202		-2.452	.015
	AVGBE	.277	.013	.839	21.733	.000
a. Dependent Variable: AVGPI						

Table 5: Coefficients Table - Brand Equity and Brand Preference

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.110	.123		.897	.371
	AVGBE	.236	.008	.906	30.193	.000
a. Dependent Variable: AVGBP						

Table 6: Coefficients Table - Brand Preference and Purchase Intention

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.179	.193		-.928	.355
	AVGBP	1.058	.050	.832	21.117	.000
a. Dependent Variable: AVGPI						

Table 7: Summary of Hypotheses Test Results H1, H2, H3

Hypotheses	Description	Status	Justification
H1	There is a significant positive impact from brand equity on customer purchase intention of automobiles in Sri Lanka	Accepted	Sig p= 0.000, R= .839 ^a , R ² = .705, Adjusted R ² = .703, β = .839
H2	There is a significant positive impact from brand equity on the customer's brand preference of automobiles in Sri Lanka	Accepted	Sig p= 0.000, R= .906 ^a , R ² = .822, Adjusted R ² = .821, β = .906
H3	There is a significant positive impact from the customer's brand preference on the customer purchase intention of automobiles in Sri Lanka	Accepted	Sig p= 0.000, R=.832 ^a , R ² = .693, Adjusted R ² = .691, β = .832

Mediator analysis for hypothesis four (H4)

Process macro by Hayes (2017) has been used by the researchers to analyse the mediator effect of the research. Hayes model 4 was used for the mediator analysis in the process macro (Hayes, 2017).

Step 1- Predicting the mediator variable using the independent variable. According to the results, brand equity is a significant predictor of brand preference as the p-value less than 0.001.

Table 8: Model Summary Outcome Variable (Brand Preference)

R	R-sq	MSE	F	df1	df2	p
.9064	.8216	.1612	911.6070	1.0000	198.0000	.0000

In here, the coefficient value of brand equity on brand preference is 0.2355 which is significant at 95% confidence level as given in the Table 9.

Table 9: Model (Brand Preference)

	coeff	Se	t	P	LLCI	ULCI
constant	.1105	.1231	.8971	.3707	-.1324	.3533
AVGBE	.2355	.0078	30.1928	.0000	.2201	.2509

Step 2 - Predicting the dependent variable using both the independent variable – brand equity- and the mediator – brand preference - and it shows that the regression model of brand equity on consumer purchase intention is also significant at $p < .001$.

Table 10: Model Summary Outcome Variable (Purchase Intention)

R	R-sq	MSE	F	df1	df2	p
.8562	.7331	.3921	270.6014	2.0000	197.0000	.0000

Mediation process showed that the mediator (brand preference), controlling for brand equity, was significant, $p = .000$.

The coefficient values for brand equity on purchase intention with the mediator is significant with a beta value of 0.1577 (Table 11) and brand preference on brand equity is also significant with a beta value of 0.5084.

Table 11: Model (Brand Equity, Brand Preference)

	coeff	se	t	P	LLCI	ULCI
constant	-.5503	.1924	-2.8599	.0047	-.9298	.1708
AVGBE	.1577	.0288	5.4760	.0000	.1009	.2145
AVGBP	.5084	.1108	4.5876	.0000	.2899	.7270

Step 3- The total effect model was also checked to see the impact of brand equity on the purchase intention of automobiles which was significant, $p = .000$ (Table 12) and a coefficient of .2774 showing a direct effect on brand equity on purchase intention which is also significant due to the $p\text{-value} < 0.05$ (Table 13).

Table 12: Model Summary of Total Effect Model

R	R-sq	MSE	F	df1	df2	p
.8394	.7046	.4318	472.3358	1.0000	198.0000	.0000

Table 13: Model (Brand Equity, Purchase Intention)

	coeff	se	t	p	LLCI	ULCI
constant	-.4941	.2015	-2.4521	.0151	-.8915	-.0967
AVGBE	.2774	.0128	21.7333	.0000	.2522	.3026

Step 4- The analysis revealed that controlling for the mediator (brand preference), is also a significant predictor of purchase intention, $p = .000$.

Step 5 - Direct and indirect effects of mediation was verified at this step.

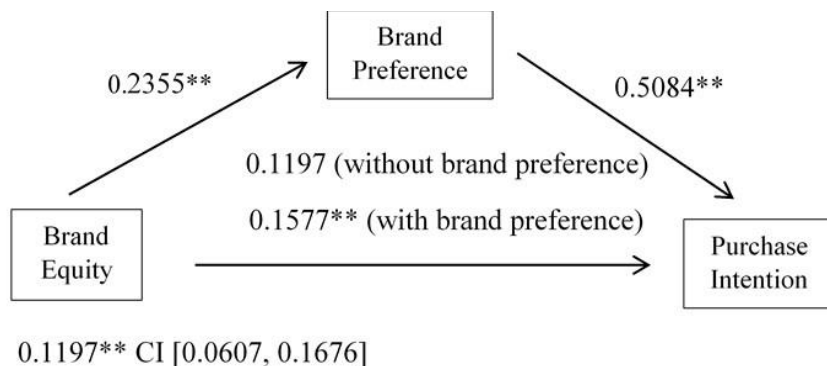
Table 14: Direct Effect of X on Y

Effect	Se	t	p	LLCI	ULCI
.1577	.0288	5.4760	.0000	.1009	.2145

Table 15: Indirect Effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
AVGBP	.1197	.0271	.0607	.1676

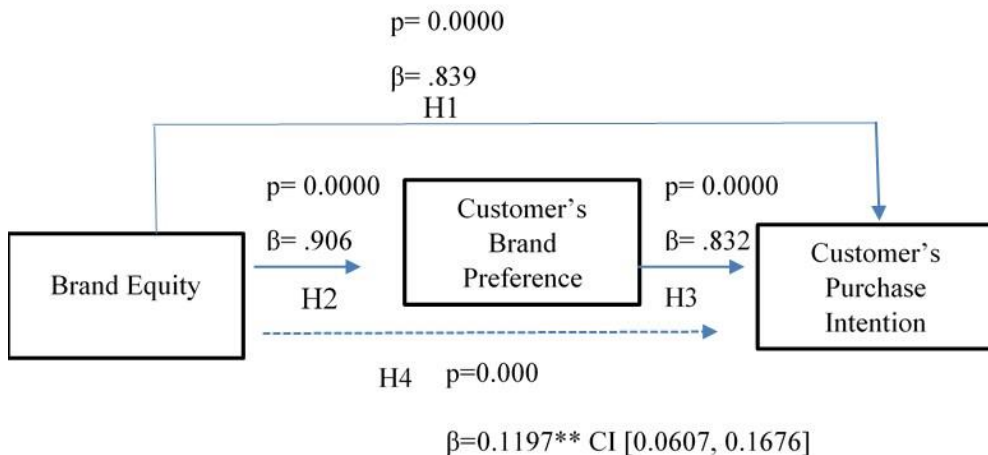
In this situation, although the brand equity was a significant predictor for both the dependent (purchase intention) and the mediator variables (brand preference), it is no longer significant in the presence of the mediator variable -brand preference; confirming the mediation effect. After the regression models, a measure for the indirect effect of X on Y is also presented (Table 14 and 15). In this situation, the effect size was .1197 with a 95% confidence interval which did not include zero (0.0607, 0.1676); that is to say, the effect was significantly greater than zero at $\alpha = .05$.

Figure 2: Direct and indirect effects

Therefore, it is confirmed that the relationship between brand equity and consumer purchase intentions is mediated by the brand preference of automobiles in Sri Lanka.

Results of the Model

Figure 3: Statistical Model



The results of the conceptual model are displayed in Figure 03.

Conclusions, Discussion, and Managerial Implications

The brand equity and power of brand name plays an important role in forming brand preferences as well purchase intentions among automobile consumers in Sri Lanka. The research hypotheses are completely supported by the analysis of the study. The relationships between brand equity and customer purchase intention (Sig $p = 0.000$, $R = .839^a$, $R^2 = .705$, Adjusted $R^2 = .703$, $\beta = .839$), brand equity and brand preference (Sig $p = 0.000$, $R = .906^a$, $R^2 = .822$, Adjusted $R^2 = .821$, $\beta = .906$), brand preference and purchase intention (Sig $p = 0.000$, $R = .832^a$, $R^2 = .693$, Adjusted $R^2 = .691$, $\beta = .832$) were supported by the study as well as the mediation effect of brand preference on the relationship between brand equity and purchase intention (Sig $p = 0.0000$, $\beta = 0.1197^{**}$ CI [0.0607, 0.1676]) was also found to be significant.

This paper empirically demonstrates the impact of brand equity on consumer responses in terms of brand preferences and purchase intention within the automobile market in Sri Lanka. Brand equity becomes an important predictor on positive brand attitudes as well as positive behavioural intentions for consumers (Buil et al., 2013). In terms of managerial implications, both manufacturer-based firms as well as intermediaries (in this case, vehicle dealers) who handle automobile sales should aim to enhance the brand equity of the related automobile brands. As per Chang and Liu (2009), building a better understanding of the brand equity and its antecedents would direct a firm's marketing activities in a positive manner. In order to achieve this, understanding of brand associations, brand awareness, perceived quality of the brands among consumers and brand loyalty perceptions all play important roles. Carefully targeted marketing efforts on building brand equity would drive future sales of the firm in the automobile market in Sri Lanka. At the same time, the study highlighted that higher brand equity leads to consumer brand preferences, strengthening the future willingness to stay with the same vehicle brand or even drive the future behavioural intentions. Especially, introducing loyalty programs targeting the customers who have purchased the respective

brands and after-sale services directed at them would improve the attitudinal loyalty (Tolba & Hassan, 2009) towards the automobile brand as well as to the dealer which in turn would drive brand preferences and future behavioural intentions of customers. Brand equity requires long-term investments for extended time-periods, which needs strategic managerial attention from the firms.

Agenda for Future Research

This research has considered the effect of brand equity as an overall effect which limits the discussion of managerial implications in terms of individual effects of the components of brand equity and the brand preference and consumer purchase intention. Also, the consumer purchase intention might not depict the actual behaviour of consumers due to the impact of demographics and lifestyle considerations. In order to overcome this limitation, the financial capacity of the consumers, their education, gender, value orientations, etc can act as moderators within the relationship of brand equity and purchase intention as well as in brand preference and purchase intention relationship. Automobile brand preferences within Sri Lanka are highly volatile due to consumers' assessing of brand quality with the country-of-origin. The future research can extend the findings by considering the customers' perceptions on brands due to country-of-origin effect as a moderator (Tolba & Hassan, 2009) within the Sri Lankan market. Finally, a longitudinal research might help assess the time lag between the preference of customers on brand(s) and the actual brand related behaviours of the customers within the automobile market.

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Evaluation of Factors when Selecting an Internet Service Provider: Special Reference to Gampola Area

Madushanka D. M. T.¹, Wijekumara J. M. N.², Kuruppu K. A. T. D. T.³
and Sugathapala S. P. A. A. M.⁴

The researchers' attempt was to investigate the factors affecting the customer's intention when selecting a particular Internet Service Provider (ISP) in the Gampola area. The researcher selected the Gampola area because of the ease of access to the sample at the period of data collection. According to the annual reports of Dialog, Sri Lanka Telecom (SLT), Etisalat, Airtel and Melstacrop (Lanka Bell) they have spent huge amounts of money on Advertising, Marketing and Sales promotion. But according to the information obtained through the aforesaid service provider arcade's in Gampola, they mentioned that they could not reach the expected customer attraction for their services. Based on the reviewed literature, researcher selected service quality, price, brand image and promotion as independent variables and customer's intention to select a particular ISP used as a dependent variable of the study. The target population includes internet users in the Gampola area. In order to collect the necessary observations, 100 internet users were selected randomly as the sample in the Gampola area. Both primary and secondary data were used to test the conceptual framework developed in this study. Questionnaires were used to collect primary data and to carry out the analysis, the tool of SPSS was used to conduct the analysis on the relationship between the variables. A reliability analysis was used to check the internal consistency of the questionnaire. The hypotheses have been tested using correlation and regression analysis. The correlation analysis resulted that all variables (SQ, P, BI, PR) were positively affected to customer intention of selecting and staying with a particular internet service provider. Results of regression analysis indicated that brand image and promotion does not significantly affect the selection of a particular internet service provider, but price and service quality has a significant effect on the selection of internet service providers. According to the study service quality, price and brand image were favorable to the customers. This research and developed model could be useful for service providers to develop SQ, P, BI and PR factors suitably to improve the customer retention on their products and to acquire new customers.

Keywords: Brand image, Internet Service Providers, Price, Price factors, Service Quality.

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¹ Faculty of Management Studies, Rajarata University of Sri Lanka. (thilina.dmt@gmail.com)

² Faculty of Management Studies, Rajarata University of Sri Lanka. (nishanthawijekumara93@gmail.com)

³ Faculty of Management Studies, Rajarata University of Sri Lanka. (kurupputd@gmail.com)

⁴ Bank of Ceylon, Kandy, Sri Lanka. (madushan9837@gmail.com)

Introduction

Although the Internet's history goes back to the early 1960's it was relatively new to Sri Lanka until the initiation of the project called LEARN (Lanka Experimental Academic and Research Network) in 1990 by the University of Moratuwa. It is the first step that was launched towards the connectivity of academic and research communities in Sri Lanka to the Internet. Also, LEARN interconnects most of the academic and other research institutions across the country. It provided the Sri Lankans their first e-mail service, which was operated by the Department of Computer Science and Engineering of the University of Moratuwa. Since 1993, academics in the country started to access the internet by means of techniques such as International Direct Dialing (IDD) on a fairly regular basis. However, in 1995 LEARN was connected to the real global internet giving unrestricted access to its users.

In addition to the academics there are many other private computer users and business organizations who want to have access to the Internet and the World Wide Web (WWW). Therefore, the need of such services emerged in order to provide the internet access to anybody. An organization that provides access to the Internet in some form is called an Internet Service Provider (ISP). Lanka Internet is Sri Lanka's first such ISP established in 1995. Now they provide necessary services such as electronic mail World Wide Web access, File Transfer Protocol (FTP), telnet and gopher. Before Lanka Internet launched these operations, Sri Lanka's communications capabilities were very limited and the technology was expensive. Only a limited number of large multinationals and shipping companies were able to access the new technology.

In addition to the internet facilities Lanka internet also specializes by providing services such as local area (LAN) and wide area (WAN) network solutions, radio modem connections, and project management. Country's second ISP was Sri Lanka telecom which also hopes to improve the nation's telecom infrastructure which will be of benefit to the internet users around the country. They provide both dialup and dedicated line access to the internet for reasonable fees. Later a number of ISP's joined the internet offering full internet connectivity to the people. However, in most cases access was restricted to users in the capital, Colombo and the suburbs.

According to the latest published report, at the end of June 2016 the number of internet users in Sri Lanka were at 6,087,164. This data is further verified by Google's Public Data Analysis which indicates a 27.4% internet penetration in the country at the end of year 2016. Facebook reported 3.8 million monthly active users as of June 2016. Assuming 50% of all internet users are on Facebook this will be 7.6 million total internet users (World Bank Stats, 2016).

There are seven main internet service providers in Sri Lanka. Those are, Hutch, Sri Lanka Telecom (SLT), Dialog, Mobitel, Etisalat, Airtel, Lankabell and Suntel. Every internet service provider must try their best to develop their marketing strategy and improve their business performance to increase their levels of competitiveness. The first step to increasing their competitive potential is to acquire customers as much as possible based on a thorough understanding of customers' decision making of how and why consumers choose particular service providers. A strong understanding of customer decision making or customer's selection behavior is then very important for the service providers in order to be successful and achieve their business goals.

Problem Statement

An internet service provider (ISP) is an organization, which provides service accessing and using the internet. Internet service providers are becoming more popular and the rapid development of information technology, is affecting almost every aspect such as

entertainment, education, business and other, of peoples' lives around the world. Currently, there are many internet service providers who provide the internet access facility to the internet community. They have become competitive to retain existing users and acquire new users into their product while users are attempting to select the best internet service provider to successfully perform their various activities through the internet services.

Price fairness influences customer satisfaction and loyalty. Service quality has positively influenced customer satisfaction in terms of loyalty and attitudes. But, there was a significant gap between the perceived satisfaction and expectation on all of the service quality dimensions (Arokiasamy and Abdullah, 2013).

Balmer et al., (2009) highlights the importance of the corporate image, asserting that a link exists between an individual's image of the organization and that person's behavior towards it. These circumstances are forcing companies to change their customer promotional strategies. It is analyzed that 'advertisement' play a dominant role in influencing the customers but most of the customers are of the opinion that promotional strategies of cellular companies are more sales oriented rather than customer oriented (Kumar, Vani and Vandana, 2011).

Telecommunication providers spend large amounts of money to promote their services. According to the annual report of telecommunication service providers in Sri Lanka they have invested money as below.

Service Provider	2019 (Million)	2018 (Million)
Dialog Group	12.0	12.3
SLT Group	9.4	9.3
Etisalat	25.8	18.7
Airtel	25.6	30.5
Melstacrop (Lankabell)	26.4	19.1

As per previous researchers' investigations, if companies invest money on advertising, sales promotion and marketing activities they could reach the customer's expected attraction on their products and services. To verify that, the researcher visited the aforesaid telecommunication arcades in Gampola area, based on the ease of access and was able to identify that these companies have also failed to reach the expected customer attraction to their service connection usage. Therefore, they are facing problems of attracting new users, retain existing users and expand their internet based services.

Internet users try to select the best internet service provider among the available internet service providers only if users become satisfied with the internet service provided by the companies. According to previous researches of other countries, researcher selected a few evaluation factors to investigate the selection decision of a particular ISP, including service quality, price, promotion, brand image customer intention to select an internet service provider.

Researcher attempts to investigate this problem and identify the key research problem of this study, which is 'why ISP's are unable to attract and retain customers as they expected considering the marketing, selling and promotional expenses they bear?'

Research Questions

This study is set out to address the following questions:

- What are the factors influencing the customer's intention to select an internet service provider in Gampola area?
- What is the most important factor which influences the customer intention to select an internet services provider in Gampola area?

Research Objective

The purpose of this study is to investigate the customer's selection of the respective internet service provider in the Gampola area. In particular, the objectives of the present study are as follows:

- To investigate the factors influencing the customers' intention to select internet service providers in the Gampola area.
- To investigate most important impact factor on customer intention to select internet services provider in the Gampola area.

Literature Review

Sri Lanka's internet service providers' past, present and future

Sri Lankan media is connected to the internet with the support of the Lankan internet services by publishing the internet editions of Sri Lanka's most famous newspapers, the Daily News and the Sunday Observer. According to the latest published report, at the end of June 2016 the number of internet users in Sri Lanka was at 6,087,164. This data is further verified by Google's Public Data Analysis which indicated an internet penetration of 27.4% in the country at the end of year 2016. Facebook reported 3.8 million monthly active users as of June 2016. Assuming that 50% of all internet users are on Facebook, this will be 7.6 million total internet users (World Bank Stats, 2016).

There are many internet service providers in Sri Lanka including Hutch, Sri Lanka Telecom (SLT), Dialog, Mobitel, Etisalat, Airtel and Lankabell. Every internet service provider tries to develop their marketing strategy and improve their business performance to increase their levels of competitiveness.

Customer Intention

'An intention' has been defined as a person's commitment, plan, or decision to carry out an action or achieve a goal and in fact has been used synonymously at times with choice, decision, and plan (Eagly and Chaiken, 1993). The intention or decision to make a selection, satisfaction is very important on that choice. A person's feeling of pleasure or disappointment could stem from comparing a product's perceived performance or outcome against his or her expectations" (Kotler and Keller, 2006, p.144). According to Aziz et al, (2014) There is a significant relationship between income, call quality, added value of services, call charges, network coverage of the mobile networks and customer satisfaction of the services delivered by the mobile telecommunication networks

Price

Price is the amount of money charged for a product or a service. More broadly, price is the sum of all the values that customers give up to gain the benefits of having or using a product or service. Historically, price has been the major factor affecting buyer choice. In recent

decades, non-price factors have gained increasing importance. However, price remains one of the most important elements that determine a firm's market share and profitability. Price is the only element in the marketing mix that produces revenue; all other elements represent costs. (Kotler and Armstrong, 2012, p.290).

Brand image

Corporate image is believed to have an influence on customers' buying decisions since it can simplify the customer's decision making and can help customers to choose the most favorable option from different companies or service providers (Markus 1977). In the telecommunication market, the extrinsic characteristics such as personal contact, the physical environment, technical support, and the responsiveness of the staff of service providers can have significant influences on customers' intentions to select a service provider (Nguyen and Leblanc 2001). The rationale is that these physical elements can constitute the benefits promised in the service transaction in the customers' eyes (Nguyen and Leblanc 2001).

Promotion

According to Alvarez et al., (2005), specified promotion is a set of stimuli that are offered sporadically and it reinforces publicity actions to promote the purchasing of a certain product. Mobile service providers are giving different promotional offers like prepaid offers on top-up recharge, E-recharge mobile top up vouchers for prepaid connection, bonus cards, phone alert of astrology, cricket score, call management services, caller tunes, free mobile calls, Short Message Services (SMS) offers, limited time free internet usage, various kinds of ring tone services, dialer tone services and other promotional offers to attract the mobile subscriber.

Service Quality

A customer's expectation of a particular service is determined by factors such as recommendations, personal needs and experiences. The expected service and the perceived service sometimes may not be equal, thus leaving a gap. The service quality model or the 'GAP model' developed in 1985 highlights the main requirements for delivering high service quality. It identifies five 'gaps' that cause unsuccessful delivery. Customers generally have a tendency to compare the service they 'experience' with the service they 'expect'. If the experience does not match the expectation, there arises a gap. Ten determinants that may influence the appearance of a gap were reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the customer and tangibles in the SERVQUAL model (Parasuraman, Zeithaml and Berry, 1985).

Service business operators often assess the service quality provided to their customers in order to improve their service, to quickly identify problems, and to better assess client satisfaction. Service quality is one of the main factors influencing the Indian mobile subscriber's intention for switching the service provider, Kumar et al, (2011).

Methods

Conceptual Framework

The researchers have identified the factor, service quality, price, brand image and promotion as independent variables and customer intention is considered as a dependent variable for this current study.

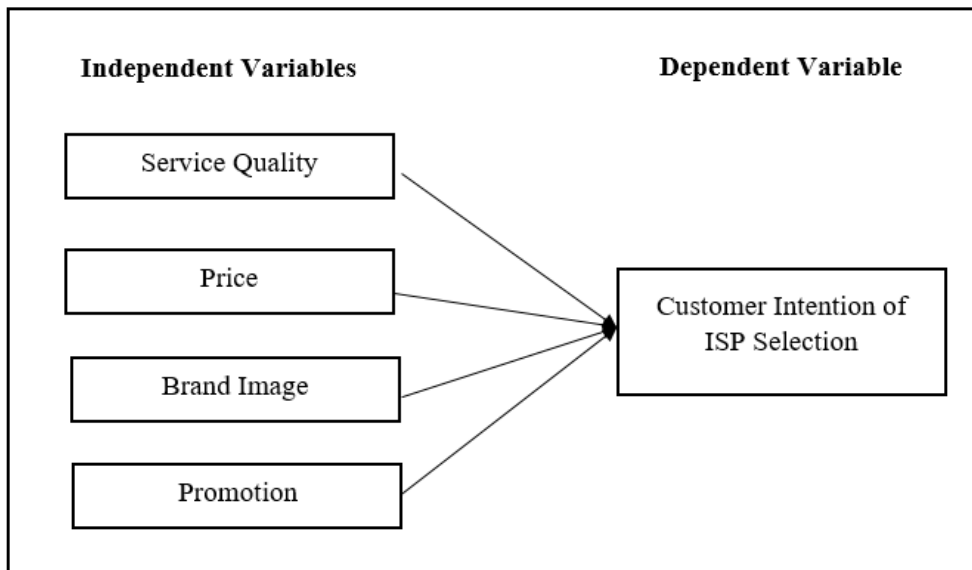


Figure 1: Conceptual framework

Source: Develop by researcher

Hypotheses

H1 - There is a significant relationship between service quality and customer intention of service provider selection.

H2 - There is a significant relationship between price and customer intention of service provider selection.

H3 - There is a significant relationship between brand image and customer intention of service provider selection.

H4 - There is a significant relationship between promotion and customer intention of service provider selection.

Type of the study

According to this research, the researcher tried to identify factors affecting the selection of internet service providers in the Gampola area, which was a problem that was commonly identified. Therefore, this research may be considered as a 'basic type' of research.

Nature of the study

The data were comprehensive and a detailed study was carried out among the internet users in the Gampola area. The researchers have used the single cross sectional design for this research. The data has been collected only once from the target population. This research follows the deductive approach and thus becomes explanatory in nature.

Sampling

The target population for this study was defined as individuals who use internet in the Gampola area. Therefore, by considering time and cost restrictions, researchers have selected

100 users who are using internet services as the sample based on simple purposive sampling technique. It was based on the age categories of each user.

Data collection method

In this research primary data was collected by using a structured questionnaire which included 35 questions to identify the relationship between independent and dependent variables. For this study, researchers gathered the secondary data from research articles, magazines, books publications, internet and annual reports, which were relevant and supported the literature review.

Methods of Data Analysis and Evaluation

In this research, data was collected through questionnaires and those data was analyzed properly to reach the objectives of the research. Therefore, researchers used this data to investigate about internet service provider selection in Gampola area. For this purpose, researchers used the reliability analysis, descriptive analysis and correlation analysis in order to analyze the collected data by Statistical Package for Social Science (SPSS 20).

Findings of the Study

Analysis of the Demographic Profile of the Sample

Gender distribution

Table 1: Gender distribution

	Frequency	Percent	Valid Percent	Cumulative Percent
female	50	50.0	50.0	50.0
Valid male	50	50.0	50.0	100.0
Total	100	100.0	100.0	

Source: Develop by researcher (2019)

According to the above table, 50% of the respondents were female and the other 50% were male.

Age level of the sample**Table 2: Age level of the sample**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18 years old below	33	33.0	33.0	33.0
18-30 years old	31	31.0	31.0	64.0
31-50 years old	28	28.0	28.0	92.0
51 years old and above	8	8.0	8.0	100.0
Total	100	100.0	100.0	

Source: Develop by researcher (2019)

Majority of the respondents (33%) were below the age of 18, 31% respondents were within the 18-30 age group, 28% respondents were within the 31-50 age group and 8% were 51 years old and above. These results indicate that the age category of below 18 was the largest segment of the Gampola area population that has internet access.

Current Internet Service Provider and the time period that the respondent had been with the respective service provider**Table 3: Current Internet Service Provider and the time period that the respondent had been with the respective service provider**

	time				Total
	Less Than 1 year	2 year	3 year	More than 3 years	
Valid service Sri Lanka Telecom (SLT)	2	0	2	2	6
Hutch	0	4	3	2	9
Airtel	0	3	3	2	8
Mobitel	4	7	9	4	24
Dialog	5	10	11	15	41
Etisalat	2	2	2	6	12
Total	13	26	30	31	100

Source: Develop by researcher (2019)

In this survey a questionnaire was provided with the potential internet service providers with seven categories representing Sri Lanka Telecom (SLT), Hutch, Airtel, Mobitel, Dialog, Etisalat and Other. The majority of the respondents (41%) indicated that Dialog was their current service provider, 24% of the respondents were seen using Mobitel, 12% of the respondents were seen using Etisalat and 9% was seen using Hutch, 8% was using Airtel and 6% was using SLT.

When considering how long they had used their current service provider, the majority of the respondents (31%) had used their current service provider for more than 3 years. 30% of the respondents had been with their current service provider for 3 years, 26% had been with their current service provider for 2 years and 13% had been with their current service provider for less than 1 year.

Respondents' reasons for using internet

Table 4: Reasons for using internet

	Frequency	Percent	Valid Percent	Cumulative Percent
Education	20	20.0	20.0	20.0
Entertainment	46	46.0	46.0	66.0
Get awareness about information	24	24.0	24.0	90.0
Shopping	7	7.0	7.0	97.0
Business Activity	3	3.0	3.0	100.0
Total	100	100.0	100.0	

Source: Develop by researcher (2019)

The key reasons for using internet were classified into five categories of education, entertainment, obtaining awareness about information, shopping and business activities. According to the above table, the respondents' mainly (46%) used internet for entertainment, 24% of respondents were using internet access to obtain awareness about information, 20% of respondents were seen using internet access for education, 7% of respondents were seen using internet access for shopping and 3% of respondents were using internet access for business activities.

Reliability Analysis

Table 5: Reliability analysis

Variable	Cronbach's Alpha	Number of Items
Service Quality (SQ)	0.782	6
Price (P)	0.703	5
Brand Image (BI)	0.701	5
Promotion (PR)	0.772	5
Customer Satisfaction (CS)	0.792	5

Source: Develop by researcher (2019)

Generally, the Cronbach alpha value should at least reach 0.7 Nunnally (1978). It should be located in 0.7-0.98, which could then be defined as 'highly reliable'. According to the above table researchers can clearly identify that Cronbach's Alpha value of customer intention is 0.792. It exceeds the standard level of reliability measurement. Therefore, one could come to the conclusion that customer satisfaction questions are more reliable to measure the customer intention. In addition to the customer s intention, Cronbach's alpha value of service quality stood at 0.782, price at 0.703, brand image at 0.701 and promotion at 0.772. According to those values Cronbach alpha value exceed the minimum level of standard. Therefore, researchers identified that 'questions' are more reliable in measuring the variables.

Descriptive statistics for Research Variables

Table 6: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SQ	100	1.00	4.17	2.3050	.60768
P	100	1.00	4.00	2.7200	.60969
BI	100	1.20	4.00	2.6300	.59178
PR	100	1.00	4.40	2.5720	.65568
CS	100	1.00	4.00	2.6880	.62171
Valid N (listwise)	100				

Source: Develop by researcher (2019)

Mean value indicates the commonly given answers by the respondents for the questions of the researchers. According to the above explanation, the mean scores of the composite variables in this research were between 2.3050 and 2.7200, which means that the respondents have given average scores on most composite variables. According to that the respondents' attitude towards the service quality, price, brand image, promotion and intention were at a moderate level. The standard deviations of the composite variables were between 0.59178 and 0.65568.

Correlation Analysis

Correlation coefficient indicates the strength and the direction of the relationship which can be computed by applying a formula that takes into consideration the two sets of figures (Sekaran, 2013).

Hypothesis Testing

Table 7: Hypothesis testing

Hypothesis	Pearson Correlation	Sig.	Status
H1 - There is a significant relationship between service quality and customer intention of service provider selection.	.565**	.000	Accepted
H2 - There is a significant relationship between price and customer intention of service provider selection.	.634**	.000	Accepted
H3 - There is a significant relationship between brand image and customer intention of service provider selection.	.481**	.000	Accepted
H4 - There is a significant relationship between promotion and customer intention of service provider selection.	.378**	.000	Accepted

** . Correlation is significant at the 0.01 level (2tailed).

Source: Develop by researcher (2019)

According to the above table, Pearson Correlation Coefficient between the independent variables of promotions, service quality, price, brand image and the dependent variable of customer intention was respectively denoted as .565, .634, .481, .378. Relationship was statistically significant, because sig value was 0.000 (which is less than 0.05) in every hypothesis. Therefore, it can be statistically indicated that there was a significant positive relationship between the independent variables and dependent variable.

Regression Analysis

Based on the conceptual model developed under Chapter Three, researchers have selected the multiple regression model to analyze the linear relationship between the independent variables and the dependent variable.

Table 8: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.709 ^a	.502	.482	.44767

a. Predictors: (Constant), PR, SQ, P, BI

Source: Develop by researcher (2019)

Model summary constrains the essential information regarding how well the regression model fits or does not fit with the observed data. R square assumed that independent variable in the model helped to explain variation of the dependent variable. As illustrated in the model summary table, R square value of 0.502 indicates that predictor variables (SQ, PR,P,BI) for the test have the ability to explain 50.2% variation of the dependent variable (CS).

Table 9: Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.227	4	4.807	23.984	.000 ^b
	Residual	19.039	95	.200		
	Total	38.266	99			

a. Dependent Variable: CS

b. Predictors: (Constant), PR, SQ, P, BI

Source: Develop by researcher (2019)

According to the ANOVA table significant value of the model was 0.000 (which is less than 0.05). That means that the independent variables significantly affect the customer intention when selecting the service provider.

Table 10: Regression coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.431	.247		1.749	.083
1 SQ	.307	.090	.301	3.426	.001
P	.438	.090	.430	4.876	.000
BI	.104	.103	.099	1.004	.318
PR	.032	.085	.034	.377	.707

a. Dependent Variable: CS

Source: Develop by researcher (2019)

According to the table, regression coefficient of service quality was 0.307 and sig value was 0.001. It was less than 0.05. Then it indicated a statistically significant learner relationship between service quality and customer intention. Regression coefficient of price was 0.438 and sig value was 0.000. It was less than 0.05. Then it indicated a statistically significant learner relationship between price and customer intention. Regression coefficient of brand image was 0.104 and sig value was 0.318. It was higher than 0.05. There is no statistically significant learner relationship between brand image and customer intention of internet users in the Gampola area. Regression coefficient of promotions was 0.032 and sig value was 0.707. It was higher than 0.05. There is no statistically significant learner relationship between promotions and customer intention of internet users in the Gampola area.

Discussion and Recommendation

The purpose of this research is to investigate the factors that influence a customer's intention to select and stay with a particular internet service provider in the Gampola area. It aims to discuss the analyzing factors affecting the customer intention with service quality, price, brand image and promotion.

Discussion of the relationship between service quality and customer intention of service provider selection

Service quality positively influences the customer intention, there is a significant relationship between the perceived satisfaction and the service quality (Arokiasamy and Abdullah, 2013). A significant positive and highest correlation effect can be seen between service quality and customer satisfaction. Service quality has an influence when attracting customers for the internet service (Sumathisri, Muthumeenakshi and Anand, 2014).

In this research, researchers found a significant positive relationship between service quality and the customer intention when selecting the service provider in the Gampola area.

Discussion of the relationship between price and customer intention of service provider selection

There is a positive and significant relationship between intention and price fairness. Price fairness is the key factor contributing towards customer satisfaction (Shahzad and Afsheen, 2012). According to Herrmann et al, (2007), price directly influences the customer intention.

This study also revealed that there is a significant positive relationship between price and customer intention when selecting the service provider in the Gampola area.

Discussion of the relationship between brand image and customer intention of service provider selection

Corporate image is believed to have an influence on customers' buying decisions since it can simplify customer decision making and can help customers to choose the most favorable option from different companies or service providers (Markus 1977).

This research found that brand image positively affects the customer satisfaction but a significant relationship could not be seen between the brand image and customer intention when selecting the service provider in the Gampola area.

Discussion of the relationship between promotion and customer intention of service provider selection

'Advertisement' plays a dominant role in influencing the customers but most of the customers are of the opinion that promotional strategies of cellular companies are more sales oriented rather than customer oriented (Kumar, Vani and Vandana, 2011). This research found that promotion is positively affecting the customer intention, but a significant relationship could not be seen between the promotion and customer intention when selecting the service provider in the Gampola area.

According to the correlation analysis the researchers have concluded that all variables positively affect the customer intention when selecting the service provider. Results of the regression analysis indicated that there is a significant relationship between the service quality and the customer satisfaction. And price also has a significant relationship with customer intention. However, other variables (brand image, promotion) did not carry a significant relationship with customer intention. Results revealed that price was the most influencing factor on customer intention.

Recommendations

This research found that price was the most influencing factor on customer intention when it came to the selection of a suitable ISP. Therefore, internet service providers should pay more attention on price factors. For managers, this finding has implications with regard to marketing strategies. The internet service providers perhaps could offer affordable packages at a lower subscription fee for that would help to expand market share and benefit different market segments. It can be viewed as a major competitive factor for service providers and can be utilized to improve their competitive advantage.

According to these findings, management needs to emphasize service quality. Due to the fact that internet service providers do not provide a tangible product, their service quality is usually assessed by measures of the service providers' relationship with customers. Thus, ISP management should pay attention to staff skill possession, knowledge, attention to customers and their needs, offering of fast and efficient services and general attitude to customer services.

Customers tend to make their purchase decision dependent on the brand image when selecting a particular service provider. Internet service providers must ensure that elements such as company name, logo and other features that distinguish the company from its competitors are outstanding in the consumers mind. Management can continually promote these identities in advertising, point of sale material and other promotional activities directed at selling services to customer.

According to the findings, 'promoting' will be useful for new consumers and it may change the new internet users mind and attract more customers for service providers by using advertising promotions. It can be done through offering excellent promotion packages and special promotion plans. Considering the result, it seems that promotions based on immediate price reductions can be used. It has been proved that it is this technique that exerts a greater influence on the brand choice process. Immediate price reductions (price cuts) have a more important effect on consumer behavior. Therefore, promotions based on price are most effective. This fact is very important, since the service providers might invest in promotional actions that are not valued by consumers.

This research will be valuable for internet service providers in the Gampola area because service providers can apply the research results with their service and marketing strategies in order to acquire new customers as well as to retain their existing ones

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A Conceptual Review on Motivations of Consumers towards Co-Creation related to New Product Development

Guruge, M. C. B¹

Active consumer engagement in the new product development stage has gained the spotlight due its ability to drill down the consumers' needs and design market offerings, which satisfy the consumers. Hence, the consumer's role has changed to a "prosumer" by combining the role of the producer as well as the consumer. In light of this, the concept of co-creation has evolved and subsequently gained attention of the researchers. However, it is questionable why consumers are simulated to engage in co-creation. This paper therefore is intended to provide a critical evaluation of literature on the motivational factors towards the consumer engagement in co-creation during the new product development stage. A rigorous literature review is carried out by choosing both conceptual and empirical papers mostly published after 2005 in reputed journals in order to critically evaluate the motivational factors discussed by many authors. Based on the content analysis consumer related factors as well as firm related factors are identified as the motivators of consumers towards engaging in co-creation. Subsequently, customer related motivators are financial rewards, social benefits, technological factors, hedonic factors and altruistic factors, which can be divided as explicit and implicit factors based on the visibility and explicit nature. Nevertheless, invitation from the company and ethics of the company are identified as the firm related motivators. Summarizing all these factors a model is presented to extend the research into a conceptual domain

Keywords: *Co-creation, Consumer Related Motivators, Firm Related Motivators, Motivators, New Product Development.*

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¹ Department of Marketing Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka.

Introduction

In today's world, technology has brought the producers, sellers and consumers closer to each other, due to the easy access to information and availability of different communication channels. Thus, consumers have become empowered and subsequently they desire to play a substantial role in the value creation process. Hence, this phenomenon has led to the concept of co-creation. This study therefore helps to understand the motivational factors towards the consumer engagement in co-creation. The research will focus on identifying the characteristics inherent to different consumers, which will simulate their engagement as well as the external factors, which induce them to participate in co-creation. This concept builds upon the extant research that have been undertaken by various researchers on co-creation to bridge the gap of consumer engagement and consumer satisfaction.

According to Doorn et al. (2010), co-creation is considered as an important manifestation of consumer engagement behaviour while Vargo (2004), defined it as the paradigm shift of customer's role from the market recipient to the co-creator. The main reason behind this, is the ability to narrow down the gap between market offerings and the consumer needs through incorporating consumers' ideas in the new product development process (Ernst, Wayne, Krafft & Soll 2010). This is further confirmed by Prahalad and Ramaswamy (2005), stating that consumers get involved in co-creation due to the limited satisfaction despite the availability of different varieties. Furthermore, this process has become easier due to the availability of social media, internet forums and online portals. With this notion, co-creation can be defined as "a collaborative new product development (NPD) activity in which consumers actively contribute and select various elements of a new product offering" (O'Hern & Rindfleisch, 2009). In this regard, the customers play the role of "prosumer" (i.e. a combination of producer and consumer), by being the user of the product which was co-created by themselves along with the business entity (Grissmann, & Stokburger-Sauer 2012; Xie, Bagozzi & Troye, 2008).

According to Hitachi Europe (2016), 61% of the businesses have told that they have been able to produce successful products due to co-creation while 51% have said that co-creation has improved the financial performance of the business. Some of the companies, which produced successful products through engaging in co-creation are P&G, BMW, IKEA, Nike, Coca Cola and Unilever (Fournier, 2020). BMW's "Tomorrow's Urban Mobility Services," is one of the initiatives taken to encourage the internet users to share their ideas and suggestions on how to improve mobility in the cities and urban areas of the future (BMW, 2010). Similarly, P&G introduced "P&G Connect+ Develop" to enable the innovators and the patent holders to get involved in the designing process (Sakkab, 2019). Furthermore, IKEA's "Co-create IKEA" platform assists in conducting polls and surveys to understand the emotional and functional needs of the customers and to get direct feedback on both in-progress prototypes and finished products (Lin, 2019). In addition, Unilever's "open innovation" platform also encourages outside parties to generate technical solutions related to intelligent product packaging, oil oxidation technology, freezing and cooling systems etc. (Unilever, 2020).

However, it took some time for the companies to adapt to co-creation. Thus, Elizabeth and Stappers (2008) have explored four reasons for this issue. First reason is people believed that all should be creative whereas the second reason is consumerism being dominated over the consumptive/creative balance. The third reason is participatory design has been seen as an academic endeavour with little or no relevance for the competitive marketplace and fourth reason is the relationships between new technologies and future human experiences that have just recently become very complex and integrated. However, with the recent attention given to co-creation, this radical transformation has led the business entities to engage in economic

activities in a more sustainable and ethical manner. Furthermore, when most of the multinational brands aggressively perform against domestic brands it is essential to find new strategies to develop local brands (Wanninayake, 2014). Hence, co-creation offers a perfect opportunity for this phenomenon.

Purpose of the Study

Consumer decision making style has become popular research area among the academics in the field of marketing and according to Sproles and Kendall, consumer decision making style is defined as the mental orientation characterizing a consumer's approach to making choices (as cited in Wanninayake, 2013). Hence, it is essential to identify the consumer decision making style which leads to consumer engagement with the brand. As stated by Hauser, Tellis and Griffin (2006), if the product offerings are designed by understanding the consumer needs deeply, the potential for a new product to be successful in the market is high. Thus, co-creation enables to incorporate consumer insights in the new product development process. Furthermore, as stated by Wi'scicka-Fernando, Misiak-Kwit and Fernando (2019), co-creation is an intermediary component in sustainable business development of customer solutions (product), customer cost (price), customer convenience (distribution), communications (promotion) and co-relation (personnel). However, gathering consumer insights for the new product development process cannot be achieved through traditional market research. Thus, marketers have a substantial role to play in drilling down available data and generating reliable consumer insight. Through co-creation, product quality and market acceptance can be increased while reducing the risk.

Since co-creation of products plays a vital role in the new product development by being an effective tool for innovative company solutions, the researchers need to identify the key drivers and the costs that are likely to simulate the co-creation process. (Hoyer et al., 2010). Nevertheless, even though co-creation has become a trending topic, researchers have not taken the attitude of customers towards the co-creation process into consideration (Wi'scicka-Fernando et al., 2019). Hence, this paper attempts at identifying the consumer motivators towards co-creation, which are generated by consumers themselves and by the firm that leads to the successful engagement in co-creation.

Design and Methodology

Even though existing literature has identified the importance of co-creation, there are discrepancies on what should be done by the companies to draw the interested parties to a common platform to engage in co-creation. Thus, it limits the usefulness of co-creation. In order to enhance the usefulness of the concept, the stimulators, which lead to the consumer engagement is investigated as the initial step of this study. In this notion, literature written on co-creation is carefully selected in order to meet the purpose of this study by filtering both the empirical papers and conceptual papers written on co-creation which are published in indexed journals. The keywords which are co-creation, consumer related motivators, firm related motivators and new product development are used when searching the papers. Furthermore, PICO (population, intervention, comparison and outcome) criteria is employed for study selection. Hence, the population is the consumers, intervention is the co-creation in new product development and outcome is the identification of motivators towards co-creation. However, this study has no comparison. Accordingly, this paper follows a deductive approach to review the concepts and empirical contributions. Research tools include literature survey methods with the aid of journal articles and theories which are examined to organize the arguments and conclusions. In due course, the paper provides a discussion based on empirical arguments and it concludes with future research directions accordingly.

Literature Review

Co-creation

Even though co-creation as well as the other concepts which evolve around co-creation are relatively new terms, the same concept has been practiced under the term of participatory design in Europe (Elizabeth & Stappers, 2008). According to Bodker (1996), a collective research approach has been followed by Norway, Sweden and Denmark by making the workers engaged in the process of increasing the value of industrial production along with the systems designers and researchers. However, even before that, Cross (1971) has identified the growing need of the participation of citizens in designing in the man-made world, since the professional designers in different fields had failed in introducing sustainable products to the market. Since this concept would bring a positive transformation to the value chain, user participation in idea generation was identified as a radical change.

When considering the recent literature, Prahalad and Ramaswamy (2004), have identified the tendency of business community shifting from the product and firm centric view to customer centric view through co-creating value with the aid of informed, networked, empowered and active consumers. Furthermore, Tseng and Piller (2003) and Hippel (2005) have investigated about “lead users” who are defined as a set of elite people who have already explored innovative ways to get things done and who are willing to share their approaches with others. However, it is questionable whether the view of this set of elite people can be generalized to the mass market and to which extent their ideas address the need of the majority of the consumers. Furthermore, Prahalad and Ramaswamy (2000) have identified that, active consumers’ engagement with the manufacturers of products and services has increased rapidly due to the development of internet. However, co-creation opens up the avenues, which were never thought of by the marketers, designers and engineers. Furthermore, even though product designs are considered as trade secrets, co-creation enables the business entities to gather fresh ideas from the outsiders.

Furthermore, co-creation is a win-win situation for both the customer and the firm. The benefits which consumer can gain through co-creation are consumer empowerment (Cova & Dalli, 2009), consumer engagement (Jaakkola & Alexander, 2014), consumer learning (Payne, Storbacka & Frow, 2008) and personalized co-creation experiences (Prahalad & Ramaswamy, 2004). On the contrary, the benefits which firms can gain through co-creation are consumer trust (Casalo, Flavian & Guinaliu, 2007; Brodie, Ilic, Juric & Hollebeek, 2013; Hollebeek, 2011), consumer commitment (Chan & Li, 2010) and consumer loyalty (Andersen, 2005; Casalo, Flavian & Guinaliu, 2007). Nevertheless, co-creation has been a solution for the failures in conventional ways of attracting and retaining customers in new market conditions (Fernando, Wijenayake & Małgorzata, 2017).

Motivators towards Co-creation

Motivation is referred to as the root cause of one’s behaviour, reason to boost one’s behaviour or actions that induce someone to engage in a voluntary activity (Deci & Ryan, 1985). Firm level stimulators and customer related simulators moderates the relationship between consumer motivators of co-creation and the degree of co-creation. If there is no proper balance between the costs and benefits involved in co-creation, consumers will not engage in co-creation with a particular firm irrespective of their interest. Accordingly, for a given level of consumer motivation for co-creation, firms have two generic options available to them to stimulate co-creation (Hoyer et al., 2010).

The first option is, company enhancing the benefits, which are sought by the customers. Thus, it is essential to identify the types of benefits which consumers are simulated for. As the

second step, the company is in the need to identify the barriers associated with co-creation from the consumer perspective and mitigate the barriers. Thus, in this study, the customer related motivators as well as firm level motivators will be investigated with the available literature in order to identify the intensity of those factors in motivating the consumers to engage in co-creation.

Consumer Related Motivators

Financial Rewards

Some consumers are motivated by either direct or indirect financial rewards (Hoyer et al., 2010; Roberts, Hughes & Kertbo, 2014; Zwass, 2010). The direct financial rewards are associated with the monetary prizes or profit sharing whereas indirect financial benefits are borne through the receipt of intellectual property rights and the visibility. However, financial rewards become important only when consumer engagement into new product development becomes more frequent (Kuvykaite & Piligrimiene, 2014). Nevertheless, the financial rewards are the extrinsic motivators explained in the Herzberg's two-factor theory (Guillén, Ferrero & Hoffman, 2014).

Social Benefits

According to Nambisan and Baron (2009), some consumers are induced by the potential to receive social benefits from titles or other forms of recognition that a firm might bestow on, particularly to the valuable contributors. In addition, it provides the opportunity for the customers to work collaboratively with the firm as well as the other customers, who share a common interest. Thus, they will be recognized in the community as well as among their social network (Hoyer et al., 2010, Nambisan & Baron, 2007). On the contrary, existence of customer networks has a positive impact on co-creation (Gummesson, 2008).

In addition, there are some consumers, who seek recognition through engaging in co-creation. Similarly, another set of consumers think that they are accountable to participate in such forums due to the social identity they have created in the community (Ahearne, Bhattacharya & Gruen, 2005; Sicilia & Palazón, 2008). Social benefits of co-creation are associated with the attributes related to "esteem level" in Maslow's hierarchy of needs such as status, social esteem and good citizens (Guillén, Ferrero & Hoffman, 2014). Hence, titles such as Amazon.com's 'Top 100 Reviewer' fulfils the consumers' need for social benefits.

Technological Knowledge

There are people who are motivated by the desire to gain technological knowledge by participating in forums and development groups organized by the producers (Nambisan & Baron 2009). Since, co-creation unveils new avenues for the consumers to gain knowledge while blending consumer insights to upgrade the new product development process, co-creation provides a win-win situation for both the consumer and the producer. In this notion, Blackberry, Lenovo Thinkpad and many technology related brands have created forums to attract consumers to gain technology knowledge in return of the ideas and inputs provided by them.

Hedonic Factors

As stated by Etgar (2008), co-creation is led by one's motivation to become creative. Hence, acting creatively enhances the enjoyment received through contributing in co-creation (Evans & Wolf, 2005; Nambisan & Baron 2009). However, when a consumer is motivated by the hedonic factors, they engage in innovation independent from the firm (Roberts, Hughes & Kertbo, 2014). Thus, invitation from the firm is not an essential need for those interested

parties to engage in co-creation. Even though, hedonic factors are identified as intrinsic motivators as per the two-factor theory of Herzberg, these factors are categorized as low level needs in the Hierarchy of needs introduced by Maslow (Guillén, Ferrero & Hoffman, 2014).

Altruistic Desire

Nevertheless, some consumers participate in co-creation with the sense of providing benefits back to the society with their creativity from a selfless motive (Hoyer et al., 2010). Most importantly there are consumers who participate in co-creation due to the high involvement or dissatisfaction with the product (Ernst et al., 2010). Subsequently, some scholars have stated that consumers are motivated to innovate a product without expecting a reward due to a personal need or dissatisfaction with the current product (Franke & Shah, 2003; Lewin, 1951). Thus, they will be motivated by the disequilibrium created due to the gap between the actual level of satisfaction and the expected level of satisfaction and the need to innovate will prevail until it is restored (Evans, Jamal & Foxall, 2006). As stated by Guillén, Ferrero & Hoffman (2014), the altruistic desire is associated with the intrinsic motivations explained in the Herzberg's two-factor theory.

Firm Related Motivators

Invitation from the Company

On the contrary, irrespective of whether the consumers are inclined to engage in co-creation, a suitable atmosphere should be created by the business entities. Thus, opportunity or an invitation to participate in the co-creation process is essential. As stated by Wiścicka-Fernando et al. (2019), mere indicator of an invitation or an opportunity is sufficient for the young people to share their ideas in the process of new product development. Subsequently, the probability of the product or service created through co-creation to be successful in the market is very high. Furthermore, Verma, Gustafsson, Kristensson and Witell (2012) have identified communication and interaction as the most important factors of co-creation which help to achieve market and product success.

Ethics of the Company

It is essential for the companies to continue its operations in an ethical and sustainable manner, which motivates the consumers, to engage in co-creation (Williams & Aitken, 2011). Thus, Kotler, Kartajaya and Setiawan (2010), stated that consumers seek products, which satisfies their needs as well as the spiritual and moral interests and needs. Nevertheless, they are concerned about the impact of their purchase decision on themselves as well as the society (Harrison, Newholm & Shaw, 2005). Accordingly, some consumers search for the opportunities, which enable them to make a better atmosphere for the stakeholders. Thus, when a company's policies on ethics and sustainability match with the perceived values of the consumers, consumers will be motivated to involve themselves in co-creation.

Discussion

Availability of information and existence of communication channels has led to the customer empowerment. Thus, customers are well informed and aware of their needs and the availability of market offerings. Subsequently, customers have shifted from being-firm centric to customer-centric by making the consumers engaged in the value creation process, especially in the new product development stage. In this light, consumers participate in co-creation by generating a new product/service idea to prototype development and testing. However, firms will not be provided with innovative ideas, unless the consumers are motivated to do so.

Literature findings suggest different factors, which lead to customers' motivation to participate in co-creation. In this study, the author identified two broad factors namely; customer related motivators and firm related motivators. Customer related motivators are categorised into two, based on the visibility and explicit nature, namely implicit and explicit factors. The 'explicit factors' consist of financial rewards, social benefits and technological factors, which can be measured and identified clearly. However, there are some grey areas, which are not implied by the consumers as the reasons to participate in the co-creation process. These are known as 'implicit reasons', which are rarely understood by the business entities such as hedonic factors and altruistic factors.

Whether, consumers are motivated by implicit or explicit factors, the firm also has a responsibility to simulate the stakeholders to engage in co-creation. In this study, invitation from the company and ethics of the company are identified as the firm related motivators. Thus, the business entities will be able to excel the success and the acceptance of the new products by simulating consumers to engage in co-creation through altering the benefits expected by them. The following diagram (Figure 1) graphically illustrates the motivations of consumers towards co-creation related to new product development.

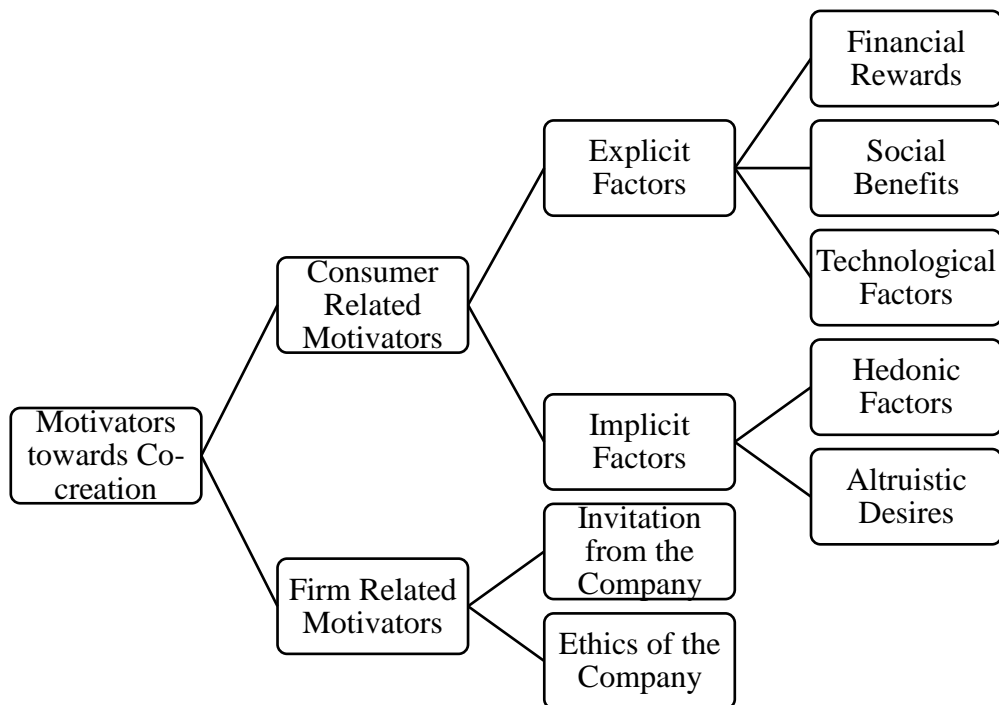


Figure 1: Motivations of Consumers towards Co-Creation related to New Product Development

Conclusion and Future Research Directions

The author was able to identify different factors in consumer level and firm level, which motivates the consumers to engage in the co-creation process. However, these factors should be validated with empirical data in future research, particularly with the consumers who have engaged or are considering on engaging in co-creation activities. Furthermore, in this study,

co-creation was looked at from the consumer to business perspective. However, the benefits of co-creation will be further accelerated by involving businesses in the co-creation. Therefore, future researchers can focus on studies on business to business interactions in co-creation.

Nevertheless, the author focused on the motivational factors towards co-creation. In the meantime, it is essential to investigate the barriers towards co-creation as well. This can be investigated with regard to the consumer nature and industry nature such as negative consumer sentiments, bad brand experiences, trust issues, the need to preserve secrecy etc. Thus, a more holistic study on both the barriers and the motivators would offer a more dynamic view for value co-creation and help the businesses to determine how the consumers should be motivated.

Finally, the involvement of social media and technology in co-creation should be investigated since the popularity of consumer groups and brand communities in social media are increasing rapidly. Therefore, future researchers can work on identifying the social media platforms, which are most suitable for collaborative value-creation activities and how they can improve co-creation activities online to win more motivated customers to collaborate.

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Brand Romance; An Upright Predictor of Brand Loyalty in Mobile Phone Market, based on University Academics in Sri Lanka

Bandara, K. B. T. U. K¹

Today, the fast-growing mobile phone industry necessitates marketers to develop strong customer-brand relationships in order to maintain a loyal customer base and prevent them from switching to other competitive brands in the market. In such a context; the concept of 'Brand Romance' is imperative for marketers to uplift brand attitude and brand loyalty of consumers. So, the main objective of this research is to investigate the impact of brand romance on brand loyalty in the mobile phone market, with a special reference to University Academics of Sri Lanka. Indeed, this is a cross sectional study with a deductive approach, supported by three dimensions of brand romance namely brand pleasure, brand arousal and brand dominance, introduced by Patwardhan & Balasubramanian, (2011). A sample of 200 Academics was selected using simple random sampling and data was collected using structured questionnaire, administered via emails. Data was analyzed using descriptive statistics and inferential statistics. Descriptive statistics revealed that the sample respondents exhibit a moderate level of brand loyalty as well as moderate levels of all the three dimensions of brand romance towards the currently using mobile phone brand. Further, results of regression analysis revealed that there is a significant impact of brand pleasure ($p < 0.05$), arousal ($p < 0.05$) and dominance ($p < 0.05$) on brand loyalty. Therefore, it is recommended for the marketers to develop strategies fostering brand romance in order to develop a loyal customer base with the brand for the long run.

Keywords: *Brand Arousal, Brand Dominance, Brand Loyalty, Brand Pleasure, Brand Romance*

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¹ Faculty of Graduate Studies, University of Kelaniya, Sri Lanka. (udesathilini@gmail.com)

Introduction

Today the fastest growth and intense competition characterize the mobile phone industry of Sri Lanka. More than half of the Sri Lankan population own phones and out of this, 47% use smart phones. According to the latest research from Counterpoint's Market Monitor Service (2018); 30+ Mobile phone brands are currently available in a small market like Sri Lanka. Samsung (36% of market share) and Huawei (24% of market share) are the largest smart phone brands in the Sri Lankan market in Q3 in year 2018; capturing three-fifth of the smart phone segment (*Counterpoint Research Market Monitor Q3 2018*). Thus, consumers in the mobile phone industry interact with hundreds of brands during their lifetime and only develop strong attachments with few of them. In fact, most of the consumers are not satisfied with one particular mobile phone brand and tend to switch around to other competitive brands in the market. Hence, the challenge for mobile phone marketers now is to keep customers' brand loyal and prevent them from switching to other competitive brands in the market (Wang & Li, 2012).

In essence, 'Brand' is a powerful differentiator in a highly competitive market, which provides the company the power to deflect competitive moves. The promise of brand is consistent with reliable quality, service and overall psychological satisfaction (Ingavale et al., 2012) and a brand should cultivate trust, confidence, comfort and reliability to be powerful within the consumer's mindsets (Ingavale et al., 2012).

'Brand' lives in the minds of consumers and brings consumers and marketers closer by developing a strong emotional attachment between them. In fact, the emotional attachments that consumers create with brands are more important to marketers who operate in highly competitive industries, to establish long lasting relationships with the consumers (Long, Tolbert & Gammoh, 2012). Hence, emotionally attached customers with a high degree of brand loyalty are less expensive to maintain and become more profitable for marketers on the long run (Basile & Vrontis, 2012). Many scholars have researched on these emotional attachments (Belaid & Behi, 2011; Hwang & Kandampully 2012) while the emotional attachment in terms of Brand Romance which has been introduced by Patwardhan and Balasubramanian (2011) leads to further investigation, especially in the mobile phone industry through this study.

According to Patwardhan & Balasubramanian, (2011); the concept of Brand Romance is described as a state of emotional attachment (evoked as a response to the brand as a stimulus) which is characterized by strong positive effects towards the brand, high arousal caused by the brand and a tendency of the brand to dominate the consumer's cognition. In fact, brand pleasure, brand arousal and brand dominance are the three main dimensions of brand romance, introduced by Patwardhan & Balasubramanian, (2011). Hence the brand romance helps to enrich brand attitude and brand loyalty (Aurier & De Lanauze, 2011); mobile phone marketers can obtain a competitive advantage by developing strategies fostering brand romance in order to ensure ever-lasting brand loyalty within a large customer base.

In spite of intensive studies and conceptual explorations of the concept of Brand Romance, the lack of attention has been given to the empirical exploration of Brand Romance in the Sri Lankan business context. Therefore, the aim of this study is to investigate the impact of brand romance on brand loyalty in the mobile phone industry, with a special reference to University Academics in Sri Lanka.

Research Objectives

The primary objective of this research is to investigate the impact of brand romance on brand loyalty of University academics towards mobile phone brands in Sri Lanka. The secondary

objectives of this study are: to investigate the impact of brand pleasure on brand loyalty towards the mobile phone brands among university academics; to investigate the impact of brand arousal on brand loyalty among university academics; to investigate the impact of brand dominance on brand loyalty towards the mobile phone brands among the University Academics in Sri Lanka.

Review of Literature

Brand Loyalty

Brand loyalty is termed as consumer's repetitive and systematic purchase of the same brand again and again (Belaid & Behi, 2011; cited in Kruger et al., 2014). Oliver (1999) defined brand loyalty as a deeply held commitment to repurchase a preferred brand consistently in the future. In essence, brand loyalty creates confidence within the customers to the brand which they are loyal over other competitive brands in the market (Kruger et al., 2014). Brand loyalty is crucial for a successful marketer, due to the facts that; brand loyal consumers are less price sensitive, they act as effective ambassadors for the brand, and they are less likely to be influenced or switched by competitor's efforts. Brand loyalty thus instigates low marketing costs, where it is more critical for mobile phone companies, because it is very easy for customers to switch around other existing mobile phone brands in the market.

According to Petruzzellis (2010); brand loyalty can be created by developing and maintaining strong consumer–brand relationships. Hence Wilson et al., (2012) argued that, for true brand loyalty to exist; consumers have to build up an emotional attachment with the brand and has to be committed to the brand on the long term. However, Patwardhan & Balasubramanian (2011) has introduced the term Brand Romance as an emotional attachment to the brand which directly influences the brand loyalty.

Brand Romance

The study of Patwardhan & Balasubramanian, (2011) established the foundation for the concept of Brand Romance; with three main dimensions of brand pleasure, brand arousal and brand dominance, which has a direct influence towards the consumer's actual purchase behavior. They define brand romance as a state of emotional attachment (evoked in response to the brand as a stimulus) that is characterized by a strong positive effect towards the brand, high arousal caused by the brand, and a tendency of the brand to dominate the consumer's cognition. Thus, brand romance is subject-specific and measures the consumer's emotional attachment towards brands. Different consumers may enjoy different levels of romance with respect to the same brand according to the level of their emotional attachment.

Brand Pleasure

Emotional attachment and consumer brand relationships start when consumers experience pleasure while using the brand (Li, Dong & Chen 2012; Mugge et al, 2010). Hence, Patwardhan & Balasubramanian (2011) has identified *Brand Pleasure* as the first dimension of brand romance that is associated with positive feelings with the brand. Brand Pleasure can be viewed as the emotional and hedonic benefits associated with product use and displeasure; the emotional and hedonic penalties associated with product use (Hawary, 2013). According to the Patwardhan & Balasubramanian (2011), it is the positive feelings (Ex: love, attraction, desire, pleasure, fun and excitement) and experiences attached to the brand. When these positive feelings intensely affect the consumers in a meaningful way, the second dimension of brand arousal can be arisen.

Brand Arousal

Arousal is termed as a physiological and psychological state of alertness (Smolders & de Kort, 2014) or a simple process of getting awareness and attention, or a collection of more complex tasks of information retention and attitude information (Ali et al., 2017). When considering the emotional attachment to brands, arousal also directly influences consumer's actual purchase behavior (Weber et al., 2012). Thus, emotional arousal can lead to consumption, when consumers become involved with the brand (Horlbrook & Hirschman, 2016). Further it is evident that, physical approach, preference, liking or positive attitudes, exploration, performance and affiliation can be increased with a higher level of arousal (Patwardhan & Balasubramanian, 2011).

Brand Dominance

Brand dominance, the last dimension of brand romance, suggested by Patwardhan & Balasubramanian (2011), reflects the brand's tendency to engage in the consumer's cognition. In fact, brands can become embedded in part of consumer's psyche and lifestyles as well. In the mobile phone industry also, consumers are emotionally attached to their phones as they regard phones as a part of their lives and represents their identity (Du Toit, 2011; cited in Kruger et al., 2014).

Conceptual Framework

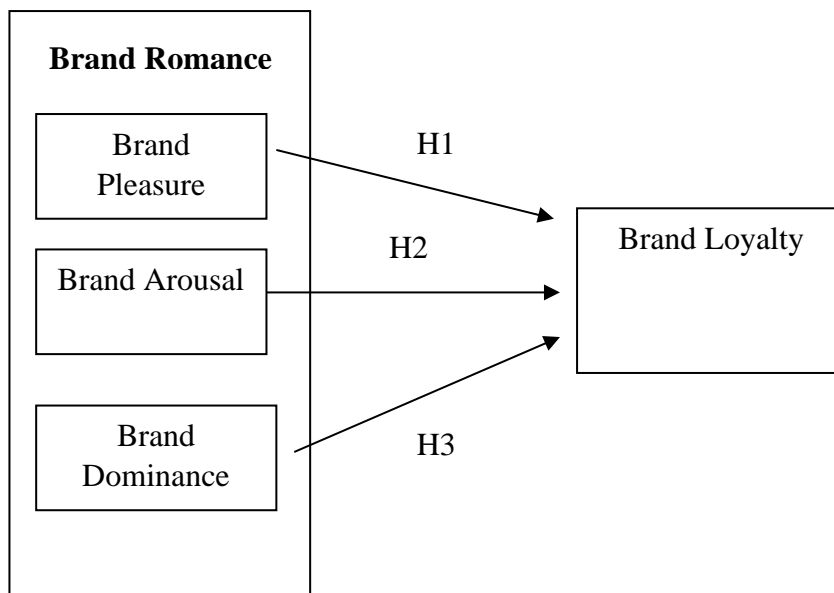


Figure 1: Conceptual Model

Research Hypotheses

- H1: There is a significant impact of brand pleasure on brand loyalty towards the mobile phone brand which is currently being used
- H2: There is a significant impact of brand arousal on brand loyalty towards the mobile phone brand which is currently being used
- H3: There is a significant impact of brand dominance on brand loyalty towards the mobile phone brand which is currently being used

Methodology

Research Design

This research is a cross sectional study with a deductive approach which is guided by a framework of three dimensions (brand pleasure, brand arousal & brand dominance) of Brand Romance as introduced by Patwardhan & Balasubramanian (2011). The target population of the study is University Academics of Sri Lanka and a sample of 200 university academics (from both permanent and temporary positions in different faculties) was selected using the simple random sampling and data was collected using a structured questionnaire (via Google form), administered via email due to the prevailing COVID 19 pandemic situation. Response rate was 83.5%, since 33 individuals declined to respond to the questionnaire. The hypothesized relationships were tested with data collected through a pre tested structured questionnaire administered as Google forms via e-mails to each and every individual.

The questionnaire consisted of two parts; demographic information as part one and questions related to brand decision of respondents as part two which included 20 questions that enabled examining the three dimensions of brand romance (brand pleasure, brand arousal & brand dominance) and the brand loyalty. Five Point Likert scale questions were used to test the respondent's agreement to the statements (1= strongly disagree, 2= disagree, 3= moderate or average, 4= agree, 5= strongly agree).

Operationalization of variables

Table 1: Operationalization of variables

Concept	Dimension	Scale item
Brand romance	Brand Pleasure	BP1-I love this brand
		BP2-Using this brand gives me great pleasure
		BP3-I am really happy that this brand is available
		BP4-This brand does not disappoint me
	Brand Arousal	BA1-I am attracted to this brand
		BA2-I desire this brand
		BA3-I want this brand
		BA4-I look forward to using the brand
	Brand dominance	BD1- My day dreams often include this brand.
		BD2- This brand often controls my thoughts
		BD3- This brand only brings positive feelings in to my mind when making purchase decision
		BD4- This brand always seems to be on my mind
Brand Loyalty		BL1- I consider myself loyal to this brand
		BL2- I feel this is the only brand I need

BL3- I consider this brand as my first choice when I want to buy a phone.

BL4- I recommend this brand for those who ask my advice.

BL5- I have a trust on this brand/ I trust this brand

BL6- I will not switch to any other competitive brand for any reasons

BL7- I prefer to purchase new versions of this brand in the future

Methods of data analysis

For the purpose of data analysis; the statistical software package of SPSS version 20 and STATA version 11 were used to analyze all the data gathered from the questionnaire survey. The techniques of analysis used in this study are depicted in the Table 2 below.

Table 2: Methods of Data Analysis

	Techniques of Analysis
Internal consistency of scale	Cronbach's alpha reliability Test Kolmogorov-Sminrov Test
Normality Test	Descriptive Statistics (Mean, Standard Deviation)
To assess the level of brand romance & brand loyalty exhibit towards the brand	Multiple Regression Analysis
To investigate the impact of each dimension of brand romance on brand loyalty	

Results & Discussion

Demographic Profile of Sample

A brief summary on demographic characteristics and personal characteristics of sample respondents are depicted in Table 3 below. The sample of the study is comprised of 167 Academics from state universities of Sri Lanka. Response rate was 83.5% out of 200, since 33 individuals declined to respond to the questionnaire.

Table 3: Descriptive statistics of demographic & personal characteristics of sample

Personal/Demographic	Frequency	Percentage (%)
Gender		
Male	74	44.3
Female	93	55.7

Age		
18-25 years	6	3.6
26-33 years	85	50.9
34-41 years	37	22.2
42-49 years	10	6.0
Above 50	29	17.4
Marital status		
Single	57	34.1
Married	110	65.9
Highest level of education		
Bachelor's degree	52	31.1
Master degree	61	36.5
PhD	54	32.3
Average Monthly Income (Rs)		
25000-75000	37	22.2
75000-125000	14	8.4
125000-225000	47	28.1
175000-225000	28	16.8
Above 225,000	41	24.6
Job status		
Permanent	128	76.6
Temporary	39	23.4
Mobile phone brand currently used		
Samsung	66	39.5
Huawei	27	16.2
Apple	36	21.6
Nokia	9	5.4
Xiomi	13	7.8
Oppo	5	3.0
HTC	3	1.8
Sony	3	1.8
Other	5	3.0

Period of using the current brand

Less than 1 year	24	14.4
1-2 years	40	24.0
2-3 years	34	20.4
3-4 years	25	15.0
More than 4 years	44	26.3

Source: Survey (2020)

Reliability Analysis

The Cronbach's Alpha reliability coefficient is used to explain how well the items in a scale are positively correlated to one another and if the values are closer to 1, it is considered as high internal consistency (Sekaran, 2011). Further, if Cronbach's alpha values are less than 0.60, then it is considered to be poor, those in the range of 0.70 is acceptable and those over 0.8 are considered to be good (Sekaran, 2011). Accordingly, from the reliability analysis, it is evident that all the variables of this study have a good level of internal consistency and reliability with all the Cronbach's Alpha values of above 0.7 as depicted in Table 4 below.

Table 4: Statistics of Reliability Test

Variable	No of items	Cronbach's Alpha
Brand Pleasure	4	0.8717
Brand Arousal	4	0.9200
Brand Dominance	4	0.8698
Brand Loyalty	7	0.8983

Source: Survey (2020)

Descriptive statistics of Dimensions of Brand Romance and Brand Loyalty

To identify the level of brand romance and brand loyalty which the individuals exhibit towards the mobile phone brand that is currently being used; the decision continuum was constructed using the mean values; 1.00-2.33: Poor, 2.34-3.67: Moderate and 3.68-5.00: High. Therefore, the descriptive statistics (Mean, Standard Deviation) of Brand Loyalty and the three dimensions of Brand Romance were calculated as depicted in the Table 5 below. Thus, sample respondents exhibit a moderate level (Mean: 3.2669, SD: 0.82774) of Brand Loyalty towards the mobile phone brand that is currently being used. Also sample respondents exhibit moderate levels of all the three dimensions of Brand Romance; Brand Pleasure (Mean: 3.5641, SD: 0.8159), Brand Arousal (Mean: 3.4356, SD: 0.90012) and Brand Dominance (Mean: 2.8458, SD: 0.86024) respectively. In fact, based on the mean values; it is evident that the sample of study showed the highest level of positive perception towards the brand in terms of brand pleasure and lowest in terms of brand dominance.

Table 5: Descriptive Statistics of Variables

Variable	N	Mean	Standard Deviation (SD)
Brand Pleasure	167	3.5641	0.81590
Brand Arousal	167	3.4356	0.90012
Brand Dominance	167	2.8458	0.86024
Brand Loyalty	167	3.2669	0.82774

Source; Survey (2020)

Results of the Multiple Regression Analysis

The Multiple Regression Analysis was conducted to determine the impact of each dimension of brand romance on brand loyalty of sample respondents towards the mobile phone brand that was currently being used. Thus, brand loyalty was treated as the dependent variable and brand pleasure, brand arousal and brand dominance were considered as independent variables. The regression model used for this study is given below.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + U$$

Y- Brand Loyalty

U- Random Error

X1-Brand Pleasure

β_0 - Intercept/Constant

X2- Brand Arousal
estimation

$\beta_1, \beta_2, \beta_3$ -Coefficients of

X3-Brand Dominance

Table 6: Model Summary

Model	R ²	Adjusted R ²	Prob>F
1	0.6636	0.6574	0.0000

Table 6 depicts the probability value, R-square and adjusted R-square of the regression analysis. Since R squared value is 0.6636, which shows that the independent variables included in the model explain 66.36% of the variation in the dependent variable. Also the *p* value (0.000) shows that the model is statistically significant.

Table 7: Results of Regression Analysis

Variable	Standard coefficient Beta values	Std. Error	t-value	p-value
Constant	0.5041	0.17014	2.96	0.004
Brand Pleasure	0.1591	0.07949	2.00	0.047**
Brand Arousal	0.3964	0.07733	5.13	0.000**
Brand Dominance	0.2931	0.06418	4.57	0.000**

Dependent Variable: Brand Loyalty [Significant Level $(p < 0.05)$, * $(p < 0.1)$]*

Further, according to Table 7, it is evident that all the three dimensions of brand romance namely; brand pleasure ($p < 0.05$), brand arousal ($p < 0.05$) and brand dominance ($p < 0.05$) has a statistically significant impact on Brand Loyalty. When considering the beta values, brand arousal has the comparatively highest positive impact on brand loyalty ($\beta = 0.396$), followed by brand dominance ($\beta = 0.293$) and brand pleasure ($\beta = 0.159$) respectively. Therefore, all the hypotheses are accepted. The Summary of tested hypotheses is depicted in the Table 8 below.

Table 8: Summary of the tested hypotheses

Hypotheses	Survey result
H1: There is a significant impact of Brand pleasure on brand loyalty towards the mobile phone brand that is currently being used	Accepted
H2: There is a significant impact of Brand arousal on brand loyalty towards the mobile phone brand that is currently being used	Accepted
H3: There is a significant impact of Brand dominance on brand loyalty towards the mobile phone brand that is currently being used	Accepted

Conclusion & Recommendations

When considering the descriptive statistics of the study, sample respondents tend to show a moderate level of brand loyalty and also moderate levels of the three dimensions of Brand romance namely; brand pleasure, brand arousal and brand dominance towards the mobile phone brand that is currently being used.

Further, according to the results of the regression analysis, it is evident that all the three dimensions of brand romance have a significant positive impact on brand loyalty. Also, the results revealed that, among these three dimensions, brand arousal has the greater impact on brand loyalty, followed by brand dominance and brand pleasure respectively.

Hence, the mobile phone industry is highly competitive in nature; it is recommended for the marketers to develop marketing strategies with more emphasis on these three dimensions of brand romance in order to develop a loyal customer base and thereby to achieve a competitive advantage over other competitive brands in the market. Thus, the survey results indicated that consumers exhibited moderate levels of each dimension of brand romance towards the mobile phone brands that were currently being used, hence it is high time for mobile phone marketers to offer the right mobile based solutions which necessitate and satisfy the needs of different customer segments in the market and thereby to uplift the loyal customer base towards the brand.

Limitations of the Present Study

Number of sample respondents were only 167 (Response rate-83.55%), since the survey was conducted via emails due to the pandemic situation in the country. Also the researcher had to face limitations when developing the conceptual model, due to lack of research in the context of Brand Romance.

Directions for Future Researches

It is recommended to conduct a comparative study on brand romance towards the Mobile phone brands by expanding the sample size, which can represent both the public and private sector employees. Also it is recommended to conduct a research emphasizing whether there is a moderating effect of demographic variables on the association between independent and dependent variables of this model.

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Impact of Social Media Advertising on Consumer Buying Behavior: With Special Reference to Fast Fashion Industry

Bandara, D. M. D.¹

Social media advertising has become the cornerstone of the most effective fashion brands' marketing strategy in recent years. Since the boom of social media, most of the fashion retailers have started to recognize the benefits of creating a value for their brands using social media platforms.

The purpose of this study is to explore the impact of social media advertising on consumer buying behavior towards fast fashion. Along with the study, it examines the consumer buying behavior aligned with the consumer decision making process. It measures the overall impact of social media advertising on the consumer decision making process in the fashion industry.

This study adopts a descriptive quantitative research design and data was collected through self-administrated questionnaire. The population of this study is active social media users in Western province and a sample of 300 consumers was selected using the convenience sampling method. The hypotheses were tested using Correlation and Regression analysis since the purpose of the study is to measure the impact of each independent variable on the chosen dependent variable.

The Results of the present study revealed that social media advertising positively influence on consumer buying behaviour in the fast fashion industry. Three independent variables out of four, namely entertainment, familiarity and social imaging have highly influenced on consumer behaviour and there is no statistically significant influence from the remaining variable, advertising expenditure. The present study provides valuable implications for fast fashion industry, providing marketers the opportunity to use the findings for identifying their consumers' real buying behavior in a digital environment and to make the decisions accordingly.

Keywords: *Consumer Buying Behavior, Fashion Retailers, Fast Fashion, Social Media Advertising*

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¹ Department of Marketing Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka. (darshana.bandara339@gmail.com)

Introduction

Background of the Study

As the emergence of social media advertising, most of the businesses have introduced their brands on social media platforms. At the initial stages, fashion retailers use social media to build awareness towards their brands, with the time most of the businessmen have recognized the importance of social media to reach their target customers, throughout the past decade, social media advertising has become much stronger. Moreover, the previous studies convince that the development of social media advertising aligns with the fashion industry.

As an industry term the “fashion” could be characterized as a consumer behavioural phenomenon, surrounding both intangible and tangible contexts, within the domain of social influence and diffusion. Similarly the Fast fashion can be defined as cheap, trendy clothing that samples ideas from the catwalk or celebrity culture and turns them into garments in high street stores at breakneck speed. (Rauturier, 2018). In terms of fast fashion, it always bonded with the youth and trendiness, whereas fashion acts as a sign and aid to differentiate social identity, taste and cultural capital. (Watson, 2013) According to Kozinnets, Andrea, Sarah & Valack, they found that both the social media and social media platforms contribute to every stage of the consumer decision making process model. Therefore, the “fashion conscious” people will be aware quicker than the others. “Traditional media such as printed media, radio, television advertising are replaced by social media advertising which has become an important channel of the marketing campaign.” (Stephanie Agresta, 2010),

Considering the Sri Lankan fast fashion industry, they have gained a strong global reputation for the ethical production of high-quality apparel, such as Victoria's Secret, GAP, Liz Claiborne, Next, Jones New York, Nike, Tommy Hilfiger, Pink, Triumph, Ann Taylor, Marks & Spencer, Boss etc. (EDB -Sri Lanka, 2019)

Not only that there are some local Fashion chains like Nolimit and Odel introducing their own brands such as “NLM” and “Embark” similarly the other fashion brands like Kelly Felder, G flock. Doing their business in a different way, they are highly positioning their products into the upmarket. Moreover, those companies are more focused on providing Sri Lankans with clothing that suits the local conditions, considering fashion industry now and almost all the fashion chains do their maximum to capture the competitors’ market, as a result of it, they use social media for their advertising campaigns. With that influence, Sri Lankan fashion retailers are in a silent war to attract consumers towards their brands.

At the same time Gerald identified that the 71% of the social media users prefer to make purchases based on social media accounts, and he also found that the millennials are considered to be the generation that spends most of their time online, with social media influencing 47 % of their purchases. (Gerald, 2019) He further pointed out that social media provides a platform and the best way to execute an effective marketing campaign. Similarly, a recent report from Deloitte shows how social media advertising effects on consumer buying behavior and also it states that 47 % millennials are influenced by the social media (Roesler, 2019) There can be seen an ever more increasing impact of social media advertising on consumer buying behavior.

Research Problem

As discussed above, many researches are conducted to identify the relationship of the social media and the fashion industry. According to Gerald, he found that 47% of the purchases are influenced by the social media advertising, (Gerald, 2019) and similarly the researcher, Roesler found that the people who are mostly doing online purchasing are millennials

(Roesler, 2019). Further going deep the researcher Preece uncovered some important findings related to the social media platforms and how they are working as an advertising tool, with that support he suggests to measure the impact of social media advertising towards consumer behavioral change. Moreover, there is no any local research that has been done on this area, to fill that gap further investigations are needed to be done in Sri Lankan context.

Concerning the Sri Lankan fashion retailers, they wanted to know the real time insights about their customers and industry to grow their businesses, therefore further investigations are needed to be done to find out most updated information regarding demographic factors, social media consumption and consumer buying behavioral patterns of their consumers, on the other hand due to the high competition, Sri Lankan fashion retailers spend thousands on their social media advertising campaigns, therefore the digital marketing firms and marketers need to identify their consumers' real buying behavior in a digital environment and make the decisions accordingly.

Based on the context, this study is going to find out the impact of social media advertising on consumer buying behavior with special reference to the fast fashion industry.

The objectives of this research study can be listed as follows,

- To examine the different social media advertising types used in fashion industry.
- To analyze the level of impact of social media advertising on consumer buying behavior of fast fashion industry.
- To identify the best practices of social media advertising to influence consumers in fast fashion industry.

Literature Review

Considering the impact of social media on fashion industry, social media is playing a major role, within the past decade a remarkable development has been witnessed. Businesses are using social media as an advertising tool. Fashion industry is one of the businesses where frequent changes occur and social media is the most convenient and cheapest method to communicate. (Nawaz Ahmad, Atif Salman, Rubab Ashiq, 2015) The emergence of social media has transformed the world and its entire way of functioning, bringing the world and its people closer. Social media denotes activities, practices, and behaviors among clusters of people who gather online to share information, experiences and perspectives using colloquial media. Colloquial or conversational media are mainly online based applications that have enabled to create and transmit content in the form of words, pictures, videos and audios. (Brake D.K, 2009) The term fashion can be characterized as consumer behavioral phenomenon, surrounding both intangible and tangible contexts, within the domain of social influence.

Social Media and Consumer buying behaviour

Studying online consumer behavior has become a major factor for scholars and researchers to understand what motivates retail consumers to shop, thus leading to enhance customer satisfaction and retail performance, (Puccinelli, 2009) Web and virtual social media have revolutionized consumers buying behavior with worldwide connection through information by superior social networking and intensified communication capacity (Ioanas, 2014), further all recent studies found that consumer behavior and buying behavior were strongly influenced by social media, personal trust, online communication and online searching attitudes of consumers. Moreover it has been noticed that Facebook and Instagram had a great influence on the consumer behavior because that provide opportunity for consumers to interact and

communicate with peers to share their opinion on products. (Ioanas, 2014) So for marketers, it is important to understand how this demographic consumes information and second, how to deliver the right marketing message that appeals to them (Johnson, 2014)

Entertainment

Entertainment has been one of the key criteria for advertisement creation. Similarly, Entertainment is used as a method to draw customer attention. Customers are more likely to recall an interesting and exciting commercial, rather than a dull one. In addition, it can be assumed that entertainment improves advertising effectiveness. That is why many businesses spend a lot of money to make humorous commercials. (Mandan, 2013)

Entertainment is an important and pervasive element of television ads. Most ads today have at least one form of content used to entertain the consumer, such as humor, creative stories, or upbeat music. Recently, advertisers have been attempting to create ads with ever-increasing levels of entertainment (Paul R. La Monica, 2007) further, it impacts purchase intentions directly through a persuasion mechanism and indirectly by increasing viewing interest through the ad's attractiveness. More the entertainment in the ad, more attractive it is.

Familiarity

According to Alba & Hutchison, familiarity is the number of products related or service related experiences gathered by the consumer. These related experiences include direct and indirect experiences such as exposure to advertisements, interactions with salespersons, word of mouth contact, trial and consumption. (Alba & Hutchinson, J.W., 1987) Since people frequently look for specific objects or a collection of items in real-life environments, visual searching is the most investigated activity (Geisler, W. S. & Cormack, L. K., 2011).

When conducting visual search studies, participants look for a target object among distracting objects (Wolfe, 2004) suggest that familiarity may deliver a positive impression of a service or an object. Similarly brand familiarity is identified as the accumulated correlated experiences that customers have had with a brand (Ballester, E.D., Navarro, A. & Sicilia, M., 2012).

Social Imaging

In general advertisements people perceive things around. Specially some specific ads represent how a user of a specific product is, or should be. Often it reveals the social class to which the user of a product belongs, its lifestyle and attitudes. This definition is highly applicable in case of beauty products. (Tashrif Haider & Shadman Shakib, 2017) Further Prior studies have shown that stereotyping and classification of a certain gender or group of people has a huge impact on the mass population. To emphasize the impact on social imaging now businesses are using influential marketing to attract consumer to the businesses by using celebrities for their advertisements. In digital context they are simply known as "social media influencers" (Newberry, 2019)

Advertisement Spending

Heavy advertising spending indicates that the company is investing in the brand, which means that the company has a large investment and thus suggests a higher product quality. (Kirmani & Wright, 1989) The earlier studies have concluded that when a huge sum is spent on advertisements and other marketing campaigns consumers begin to expect more from that particular brand. It creates an illusion of better quality of a product or service from that brand. (Tashrif Haider & Shadman Shakib, 2017). Moreover, global landscape of advertising shows a huge development throughout the past few years, it is estimated that spendings on

advertising worldwide will surpass 560 billion U.S. dollars in 2019, representing a growth of roughly four percent compared with the previous year. (A. Guttman -Statista analyser , 2019).

Impact of social media on consumer buying behaviour

Concerning the literature, it shows that there have been many studies conducted, focusing on social media and the fast fashion industry. Yet only few studies are found that have focused on the impact of social media advertising on consumer buying behavior. In 2013, Kumar and Raju published their research paper on “The Role of Advertising in Consumer Decision Making”. In their study, they have found that advertisements are capable of changing consumer opinion on particular products. (D.P Kumar & K.V Raju , 2013), Furthermore, the primary objective of advertisement could be identified as making an impact on the consumer buying behavior.

Most of the time, consumer buying behavior is influenced by liking or disliking of consumer towards the advertisement of the product advertised (Smith et al, 2006). It can therefore be said that the consumer behavior towards a product is entirely depending on advertising, without any consideration of the features of the product.

In 2017, Tashrifa Haider & Shadman Shakib have identified the impact of social media advertising on consumer buying behavior. In their study, they have identified four independent variables of social media advertising that makes an impact on consumer buying behavior, which are Entertainment, Familiarity, Social Imaging and Advertisement spending (Tashrifa Haider & Shadman Shakib, 2017). The researcher used this model as the conceptual framework of the study.

Conceptual Framework

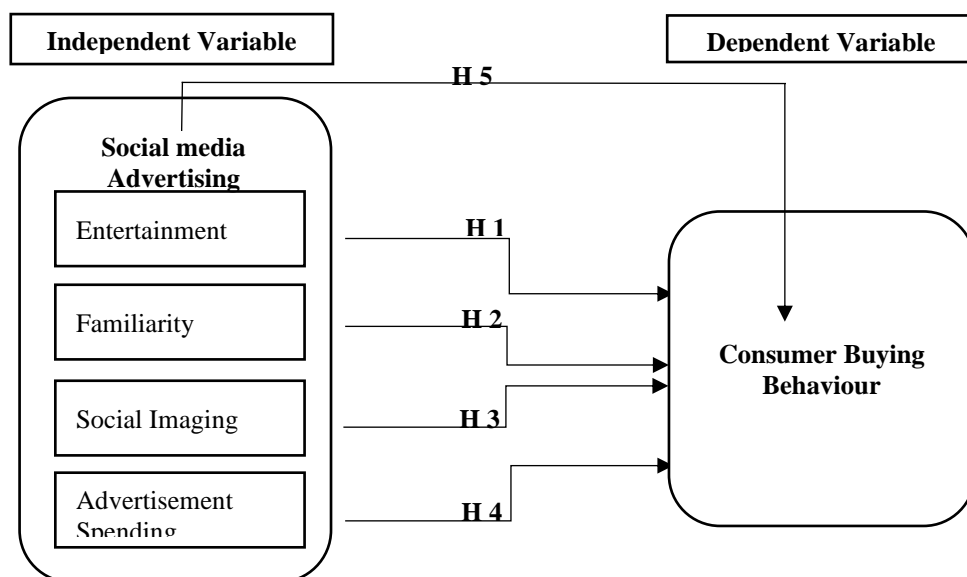


Figure 1

Source: Tashrifa Haider & Shadman Shakib, 2017

Hypotheses

The researcher has developed following hypotheses based on the theoretical model.

Hypothesis 1

H 1: Consumer's buying behaviour is positively influenced by Entertainment factor of the social media advertising campaign.

Hypothesis 2

H 2: Consumer's buying behaviour is positively influenced by Familiarity factor of the social media advertising campaign.

Hypothesis 3

H 3: Consumer's buying behaviour is positively influenced by Social Imaging factor of social media advertising campaigns.

Hypothesis 4

H 4: Consumer's buying behaviour is positively influenced by the amount that is spent in social media advertising campaign.

Hypothesis 5

H 5: Consumer buying behaviour is positively influenced by Social Media Advertising

Methodology

Research Design

Research design explains the total structure of the research methodology and it contains the Research philosophy, Research approach, Research strategy and time horizon and techniques and procedures. Research philosophy of the study can be identified under positivistic, epistemological, assumption through the research therefore the researcher is separated from the study. Deductive research approach will be conducted on the study that means research is focused to test existing theory.

Research strategy identified as the "Survey" which means research used questionnaires to collect the research data. Time horizon of the study can be selected as one-shot/ cross-sectional which means data were gathered only one time.

Population and Sample

Population is the entire group of people that the researcher wishes to investigate. In other words, the population includes all the elements of the study. According to the mid-year population estimates made by Department of Census and Statistics, study population is selected from the western province, which represents the highest population of Sri Lanka. The Study population is confined to the western province, which consisted of Colombo, Gampaha and Kaluthara districts collectively 28% of the total population of Sri Lanka which is 6,149,000 (Department of Census & Statistics, 2019). Study undertakes the target population as fashion conscious and active social media users live within the western province. Data were gathered from the sample of 300 consumers of the population using the convenience sampling method.

Data Collection Method

The primary data source of this research was mainly obtained from the questionnaires. Therefore, questionnaires were distributed both offline and online to the target respondents, secondary data were gathered by referring to the previous studies and other secondary information sources.

Data Presentation and Analysis

As the study is more quantitative oriented, collected data will be analyzed using an analyzing software named “Statistical Packages for Social Sciences (SPSS-26)”. It contains, Assumption testing, correlation analysis, regression analysis in both simple linear and multiple linear methods in order to test the hypotheses.

Data Analysis and Discussion

Descriptive Statistics

Descriptive statistics were used to explain and interpret the basic characteristics of the data.

Table 1: Descriptive Statistics

	Entertainment	Familiarity	Social Imaging	Advertisement Spending	Consumer Buying Behaviour
Mean	2.9908	3.1511	3.0167	2.8133	3.0813
Median	3	3	3	3	3
Mode	3.25	2.33	3.2	3.33	3
Std. Deviation	0.799	0.847	0.754	0.872	0.733
Variance	0.639	0.719	0.569	0.761	0.539
Skewness	0.009	0.326	0.011	0.01	0.013

Source: Survey Data, 2019

According to the table 3 mean value of the variables; Entertainment, Familiarity, Social Imaging and Advertisement Spending and Consumer Buying behaviour respectively state 2.99, 3.15, 3.01, 2.81 and 3.08 which have dispersed from the mean values amounting 0.799, 0.847, 0.754, 0.872, 0.733 of standard deviations lay at the acceptable range.

Reliability Test

Considering the dependent and independent variables, Consumer Buying behavior, Entertainment, Familiarity, Social Imaging and Advertisement Spending, respectively state 0.866, 0.934, 0.871, 0.856, 0.768 of Cronbach's Alpha values and all of those values are greater than 0.7. Therefore, the extent to which the questionnaire of this study remains the same, and the questionnaire or the measurement continue to be stable over time and the similarity of measurements within a given time period is ensured.

Table 2: Reliability Analysis

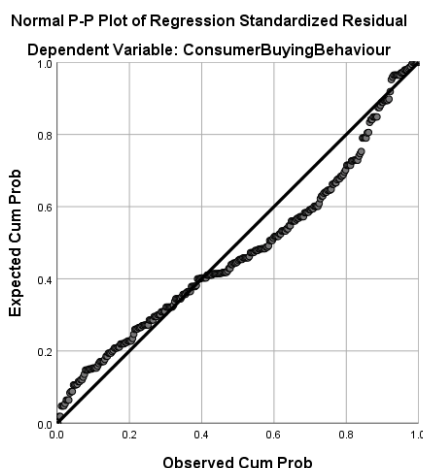
	Cronbach's Alpha	N of Items
Consumer Buying Behaviour	0.866	5
Entertainment	0.934	4
Familiarity	0.871	3
Social Imaging	0.856	5
Advertisement Spending	0.768	3

Source: Survey Data, 2019

Assumption Testing

Normality Test

Normality derives from the normal distribution which is a key concept of statistics in practice, according to the below normal probability plot it can be assumed that most of the dots were close to the normality line. Thus, it can be concluded that the dataset is normally distributed.

**Figure 1: Normal Probability Plot**

Source: Survey Data, 2019

Multicollinearity Analysis

Table 3: Multicollinearity Analysis

	Collinearity Statistics Tolerance	Statistics VIF
Entertainment	0.148	6.745
Familiarity	0.436	2.295
Social Imaging	0.128	7.784
Advertisement Spending	0.689	1.451

Source: Survey Data, 2019

According to Weisberg & Britt state that anything under 0.20 tolerances and exceeds 10 of VIF value suggests serious multicollinearity in a model. (Weisburd, D. & Britt, C., 2013) Here Entertainment and social Imaging indicates a value under 0.20 and all the other independent variables exceed 0.20 of tolerance level and all the VIF values reported are lesser than 10, thus it can conclude it nearly fulfills the conditions.

Linearity

Table 4: Linearity Table

R² linearity value	
Entertainment	0.853
Familiarity	0.762
Social Imaging	0.864
Advertisement Spending	0.318

Source: Survey Data, 2019

According to the above table 4, values taken from the linearity graphs show the majority of the dots lie along with linear line, therefore, it can conclude that there is linear relationship between separate independent variables and the dependent variable.

Homoscedasticity

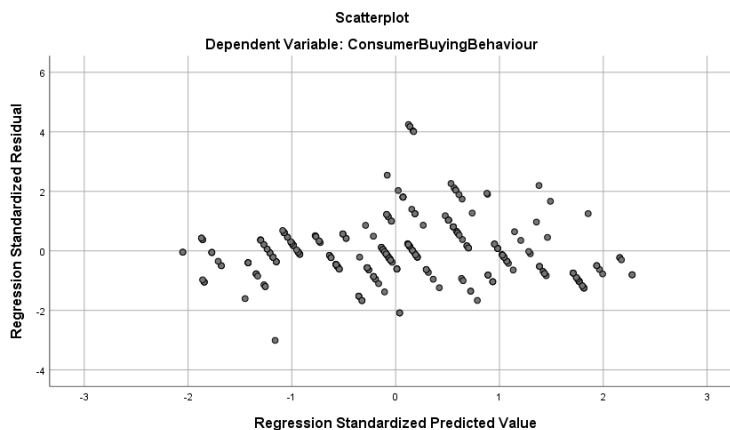


Figure 2: Homoscedasticity

Source: Survey Data, 2019

Scatter plot indicates a random array of dots around the regression line. Thus, all independent variables showed no obvious signs of funneling, therefore it can be concluded that the assumption of homoscedasticity has been met.

Correlation Analysis

According to the table 5 the Pearson's correlation values with respect to each independent variable, Entertainment, Familiarity, Social Imaging, Advertisement spending, reported a correlation values of 0.924, 0.873, 0.929, and 0.564 respectively.

Table 5: Correlation Analysis

** Correlation is significant at the 0.01 level (2-tailed).	Consumer Buying Behaviour	Entertainment	Familiarity	Social Imaging	Advertisement Spending	Sig. (2-tailed)
Consumer Buying Behaviour	1	.924**	.873**	.929**	.564**	0.000
Entertainment	.924**	1	.711**	.922**	.516**	0.000
Familiarity	.873**	.711**	1	.746**	.468**	0.000
Social Imaging	.929**	.922**	.746**	1	.551**	0.000
Advertisement Spending	.564**	.516**	.468**	.551**	1	0.000

Source: Survey Data, 2019

Regression Analysis

Model Summary

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.980 ^a	0.960	0.959	0.14832	0.960	1756.472	4	295	0.000

Source: Survey Data, 2019

R Square represents the Coefficient of Determination which measures the proportion of variation in one variable that is explained by the other. R square of the model is obtained as 0.960. Hence it can be identified that 4% of unexplained variations are involved in the model. Therefore, 96% of the dependent variable can be explained from the independent variables; Entertainment, Familiarity, Social Imaging and Advertisement Spending

ANOVA

Table 7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	154.566	4	38.641	1756.472	.000 ^b
	Residual	6.490	295	0.022		
	Total	161.055	299			

Source: Survey Data, 2019

According to the above table 7 it depicts, P value is 0.000, which is less than 0.05. It illustrates that the overall model applied can be statistically significant and predicts the dependent variable. Further table revealed that out of total 161.055 of the sum of square, 154.566 of variation can be explained by regression where 6.490 of variation of dependent variable consumers' buying behavior is explained by the residual. Thus, it can be concluded that the model is fitted because a relatively large portion is explained by regression.

Coefficients

Table 8: Coefficients Multiple Regression

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	β	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	0.104	0.038		2.759	0.006	0.030	0.179
Entertainment	0.354	0.028	0.385	12.694	0.000	0.299	0.409
Familiarity	0.329	0.015	0.380	21.452	0.000	0.299	0.359
Social Imaging	0.262	0.032	0.269	8.252	0.000	0.199	0.324
Advertisement Spending	0.033	0.012	0.039	2.796	0.006	0.010	0.056

Source: Survey Data, 2019

According to the table 8, it depicts the beta (β) and significance (p) values with respect to each independent variable towards the consumer buying - behavior, Entertainment ($\beta = 0.354$, $P = 0.000$), Familiarity ($\beta = 0.329$, $P = 0.000$), Social Imaging ($\beta = 0.262$, $P = 0.000$), Advertisement spending ($\beta = 0.033$, $P = 0.006$), all the independent variables indicate positive values and all the significance values lie on the accepted range that is $P < 0.05$. Therefore, it can be concluded that social media advertising indicates a significant positive relationship towards the dependent variable consumer buying behaviour. Therefore, the regression model can articulate as follows.

$$\hat{Y} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

- \hat{Y} = Dependent variable = Consumer Buying Behaviour (CBB)
 X_1 = Independent Variable 1 = Entertainment (EN)
 X_2 = Independent Variable 2 = Familiarity (FA)
 X_3 = Independent Variable 3 = Social Imaging (SI)
 X_4 = Independent Variable 4 = Advertisement Spending (AS)
 α = Constant value
 ϵ = Error
 $\beta_1, \beta_2, \beta_3, \dots$ represent the Coefficients

$$\hat{Y} = 0.104 + 0.354 X_1 + 0.329 X_2 + 0.262 X_3 + 0.033 X_4 + \varepsilon$$

$$CBB = 0.104 + 0.354 EN + 0.329 FA + 0.262 SI + 0.033 AS + \varepsilon$$

Formula 1 : regression model

Hypotheses Testing

In order to test the hypotheses of the current study, linear regression and multiple regression analyses were adopted. The Hypothesis can be tested using R, R Square P - value (sig level) and the Coefficient (B) ; therefore R and R square results taken from simple linear regression tables and coefficient values have taken from the multiple linear regression tables. Below table 9 depicts the summary results of regression analyses.

Table 9: Summary of Hypotheses Testing

Hypothesis	Relationship	Status	Justification
H1	Positive Significant	Accepted	R = 0.924 R Square = 0.853 P-value = 0.000 Coefficient = 0.354
H2	Positive Significant	Accepted	R = 0.873 R Square = 0.762 P-value = 0.000 Coefficient =0.329
H3	Positive Significant	Accepted	R = 0.929 R Square = 0.864 P-value = 0.000 Coefficient =0.262
H4	Positive Significant	Accepted	R = 0.564 R Square = 0.318. P-value = 0.000 Coefficient =0.033
H5	Positive Significant	Accepted	R = 0.980 R Square = 0.960 P-value = 0.000 CBB =0.104 + 0.354 EN + 0.329 FA + 0.262 SI + 0.033 AS + ε

Source: Survey Data, 2019

Summary of Key Findings

According to the descriptive statistics of demographic variables it can be found almost all the respondents have their interest on fast fashion. 59% from the whole sample is represented by females. Majority of the respondents' age lie between 21-30 age on results, which is categorized as young adults.

Analyzing the social media presence of the sample, 87 % of respondents indicate that there are following fashion brands online.

Entertainment, Familiarity, Social Imaging and Advertisement Spending Separately state 0.924, 0.873, 0.929, 0.564 of Pearson Correlation values towards the consumer buying behavior. Therefore, Social Imaging and Entertainment factors state the highest correlation with the dependent variable consumer buying behaviour whereas advertisement spending states the moderate correlation.

According to table 9, β coefficient of the Entertainment indicates 0.354. if the Entertainment increases by one unit while other variables are constant, the Consumer Buying behavior increases by 0.354 (35.4%). Similarly, the familiarity depicts β value of 0.329. It illustrates if the Familiarity is increased by one unit while other variables are constant, the Consumer Buying behavior increases by 0.329 (32.9%). β value of Social Imaging indicates 0.262, if the Social Imaging increases by one unit while other variables are constant, the Consumer-Buying behavior increases by 0.262 (26. 2%). Whereas Advertisement Spending Indicates beta value of 0.033 and it illustrates if the Advertisement Spending increases by one unit while other variables are constant, the Consumer Buying behavior increases by— 0.033 (3. 3%). Further the P-value of the variables states that less than 0.05 level of significance, which implies a significance relationship, that can conclude all the hypotheses of the study have been accepted.

Conclusion and Recommendations

Managerial Implications

Constructing the managerial implications of the study, it depicts a more realistic and practical implications, therefore the fashion industry retailers can use this study to change the consumers buying behavior towards their brand, also findings of the study can directly apply on the fast fashion industry itself. Hence, the study provides the following recommendations.

In practice, fashion retailers use more attractive advertising campaigns to develop their brands, from those advertisements fashion retailers can influence people to purchase their brand, which means they are using advertising to make a positive impact on the consumers' buying behavior therefore, the fashion retailers need to think of innovative ways of getting their consumers.

The Present study found that the most suitable advertising types for change consumer buying behavior are entertainment, Familiarity, Social Imaging and advertisement spending, assume that the fashion retailer uses social imaging in their social media campaign that means fashion retailer uses an influencer such as a celebrity to endorse the fashion brand, after exposing to the advertisement people try to follow that personality and accordingly people think of purchasing the product. Therefore, indicators of social imaging can be identified as Customer Image and Superiority, which means Social class that shows in advertisement will increase customer image towards fashion brands and social imaging shows the superiority. When competing with other fashion brands therefore, that can conclude social imaging has a positive impact on consumer buying behaviour. Similarly, all the other variables of study have

statistically proved the positive impact on consumer buying behavior, therefore it is recommended to adopt to Entertainment, Familiarity, Social Imaging and Advertising spending to develop the campaigns.

Areas for Future Research

The fashion industry may change in the wake of cultural influences. Therefore, future researchers need to focus on cross-cultural aspects. This study is focused only on the overall impact that social media advertising is making on consumer's decision making process. In consequence, future researchers need to measure the impact of each element of the decision making process. Moreover, the study used survey as the data collection method and it may create limitations because some questions can confuse the respondents and they may refuse to answer. Therefore, adaption of questions to uncover deeper emotional influencers would be recommended for future research. Considering the study, it was basically conducted on the quantitative aspect. Thus it would be more apprehensive to conduct both the qualitative and quantitative research method that can generate more useful insights.

Limitations

- Measuring the impact of social media advertising on consumer buying behaviour, it is limited only to fashion industry, therefore generalizing the findings need further investigations for the other contexts.
- Sample size of the study is limited only to 300 respondents, that might not be capable of getting accurate outcome from large population.
- Geographical area of the research will be limited only to the western province; therefore, generalizing the results need further investigations.
- Since the convenience sampling technique was used researcher's biases can be found, therefore that can be identified as a limitation of the study.

Conclusion

This study was conducted to measure the impact of social media advertising on consumer buying behavior: special reference to the fast fashion industry. Gathered data were analyzed using descriptive and inferential statistics. Therefore, findings of the regression analysis show that the independent variables of the study; Entertainment, Familiarity, Social Imaging, and advertisement spending, significant positive impact on dependent variable, consumer buying behavior, therefore all the four hypotheses of study were accepted. Implications of the study provide a source of knowledge to Fashion Retailers and marketers. Similarly, study contributes as a source of literature to the future researchers.

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Social Media Marketing: A Literature Review on Consumer Products

Siriwardana, A.¹

Social media is used by billions of people around the world and has fast become one of the defining technologies of our time. Social media allows people to freely interact with others and offers multiple ways for marketers to reach and engage with consumers. Due to its dynamic and emergent nature, the effectiveness of social media as a marketing communication channel has presented many challenges for marketers. It is considered to be different to traditional marketing channels. Many organizations are investing in their social media presence because they appreciate the need to engage in existing social media conversations in order to build their consumer brand. Social Medias are increasingly replacing traditional media, and more consumers are using them as a source of information about products, services and brands. The purpose of this paper is to focus on where to believe the future of social media lie, when considering consumer products. Paper followed a deductive approach and this paper attempts to review current scholarly on social media marketing literature and research, including its beginnings, current usage, benefits and downsides, and best practices. Further examinations to uncover the vital job of social media, inside a digitalized business period in promoting and branding consumer products. As a result of the comprehensive analysis, it undoubtedly displays that social media is a significant power in the present marketing scene.

Keywords: *Consumer Products, Customer Engagement, Digitalization, Social Media*

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¹ Doctoral Student, University of Kelaniya, Sri Lanka. (anushka@learning.acbt.lk)

Introduction

Expanding focus around worldwide development of events and the far-reaching utilization of technology in marketing, advertising and promotions have led moves in the manner by which organizations center around consumers (Quelch & Jocz, 2008). Researchers have perceived that innovation has gotten a significant segment in expanding markets and have characterized whole advertising systems around worldwide access to innovation. Simultaneously, advertising and promotion frequently center around the psychological, emotional, what's more, social variables impacting customer behaviors, components that must be fused into innovation-based advertising (Quelch & Jocz, 2008). Therefore, even within the sight of worldwide extension and new innovations, organizations need to take a look at the four basic "Ps" of advertising: product, price, place, and promotion (Quelch & Jocz, 2008).

Rust, Moorman and Bhalla (2010) researched that while numerous organizations approach a variety of kinds of innovations that could enhance consumer interest, expand brand acknowledgment and improve overall marketing and numerous underuse technologies as an establishment for interacting with customers. These researchers, however, seem to suggest that extended utilization of information technologies and social media will be the trend in the future (Rust, Moorman & Bhalla, 2010). Instead of concentrating on short term promoting through innovation, capable organizations are coordinating social media mechanisms to upgrade the relationship with customers. Organizations often center around three of the most broadly utilized social media platforms for use in product marketing and branding: Facebook, YouTube and Twitter (Muntinga, Moorman & Smit, 2011; Shi, Rui & Whinston, 2014). More than any time in the past, organizations are perceiving the estimation of the utilization of techniques to draw in purchasers in a way that consistently reintroduces the products, increases the appeal of products, or identifies social segments to product encounters. Online life sites have become the center point of information distribution on products, including the introduction of new product lines, the formation of brand awareness, and methods to shape consumer conduct (Muntinga, Moorman & Smit, 2011). Social media gives the novel chance to utilize informal advertising to a far-reaching crowd, supporting consumer to-customer communication and advancing brand awareness through an enormous scope of interpersonal organization (Kozinets, de Valck, Wojnicki & Wilner, 2010).

Social media can be defined as "consumer-generated media that covers a wide variety of new sources of online information, created and used by consumers intent on sharing information with others regarding any topic of interest" (Kohli, Suri, & Kapoor, 2014). "According to eMarketer (2013), nearly one in four people worldwide use social network sites - a number of about 1.73 billion people. By 2017, the global social network audience is estimated to be around 2.55 billion people" (Schivinski, Christodoulides, & Dabrowski, 2016). When assessing social media as a marketing tool, most researchers include both mobile and web-based technologies that focus on ways that users "share, co-create, discuss and modify user-generated content" (Kohli, Suri, & Kapoor, 2014). This is considered by most to be a paradigmatic shift in the way companies market their products, because companies are relying on consumers more than ever before to direct their marketing processes and create the discourse around branding (Kohli, Suri, & Kapoor, 2014).

Not at all like print or TV promoting, social media isn't a publicizing platform all by itself, and subsequently, organizations can be challenged with deciding how consumers receive information and impact of the commitment to the branding procedure in consumer goods. Positive remarks in online life scenes can have a positive effect, yet negative remarks can likewise be a part of the brand exchange and will most likely be unable, to be controlled by the organizations utilizing social media networking for promoting consumer goods (Ho-Dac,

Carson & Moore, 2013; Kohli, Suri & Kapoor, 2014). Simultaneously, customers take an interest in the conversation and trades that impact the branding procedure, at the same time giving almost no consideration to their cooperation in the branding or marketing process (Kohli, Suri & Kapoor, 2014).

Social networking locales like Facebook have given another method of presenting brand-related content and making trades with customers by creating consumer interactions (Shen & Bissell, 2013). The estimation of this methodology depends on the move in the manner by which the Web is being utilized, and social venues are progressing. A decade prior, the main online action was erotic entertainment, yet only 10 years after that fact, this has moved to a long range social networking communication (Shen & Bissell, 2013). Thus, about 93% of organizations utilize some type of social media communication for promoting and branding consumer goods (Shen & Bissell, 2013). In their 2013 study, Shen and Bissell kept up that at any given year, there are, in excess of 200 million dynamic online clients in the US who go through over 29 hours spent on web-based browsing, product appraisal and networking. Of this enormous measure of social networking use, Facebook is the pioneer, with the most time spent on this social network leader (more than 7 hours for each individual every week) (Shen & Bissell, 2013).

Consumer goods are products bought for consumption by the average consumer. Alternatively called final goods, consumer goods are the end result of production and manufacturing and are what a consumer will see on the store shelf. Clothing, food, and jewelry are all examples of consumer goods (Cooper, Maitland, Siu & Wei, 2015). Basic or raw materials, such as copper, are not considered consumer goods because they must be transformed into usable products. In Consumer Products Market, aggressive marketing is required because the customers of consumer product market lack in loyalty and tend to shift from one brand to another very quickly (Cooper, Maitland, Siu & Wei, 2015). The consumer products market is characterized by high level of competition among the sellers. The companies are continuously engaged in modification of business models and business activities to match up with the changing consumer needs (Cooper, Maitland, Siu & Wei, 2015).

Utilization of web-based social networking is developing among individuals in Sri Lanka and Facebook has turned into the most famous and engaging social media platform when promoting consumer products (Thuseethan & Kuhanesan, 2014). Absolute populace in Sri Lanka is 20.86 million and there are 6.26 million dynamic Web users and 4.9 million dynamic social media users. When considering the investigation of the utilization of Facebook, one can see that there are 4.9 million month to month dynamic clients and 86% of them log on to it through cell phones. It was additionally recorded that 49% of Facebook clients use it daily. Insights further show that 30% of Facebook profiles belong to females while saying 70% is male (Simon, 2017). Further, according to (Global stats, 2019) the social media stats as of June 2019 hold 82.06% of Facebook users, which is comparatively the most popular social media platform used by Sri Lankan internet users. A quarter of online social media users follow their favorite product or brand in their social network. Among them 80% of them follow the company or brand pages on Facebook. Therefore, respective presence on Facebook makes brands discoverable and connected (Perera, 2017).

Purpose of the Study and Methodology

The term FMCG stands for Fast Moving Consumer Goods (FMCG), which is also known as consumer-packaged goods. These goods include consumable items which the customer purchases at a regular interval. With packaged goods topping the line to toiletries and other household products, it somewhat extends to certain electronic goods as well. FMCG sector

has a total market size of US\$ 13.1 billion and is the fourth largest sector in the economy (Cooper, Maitland, Siu & Wei, 2015).

A survey conducted by Ernest and Young states that 95.7% of organizations in India use the digital media for advocating the use of their product and build communities to engage the customer; while 76.1% utilize it to impart information and other news regarding their product. Social media was used for both the purposes by 16% of the organization. The reason behind this high usage is the ability to generate leads and ease in implementing customers' services (Earnst & Young, 2013). FMCG relies heavily on social media channels which is a part of the digital ecosystem when it comes to engaging customers (Earnst & Young, 2013). Direct access is offered to FMCG organization by the social media to access the users of their product, as well as to keep up with the needs and wants of the customer. Social media is most suitable for real time engagement with the customers for FMCG since consumer is equipped with digital technology at their fingertips. They prefer to research the digital sphere before they purchase and ask for recommendations and reviews from any of the brand community which is present on the digital sphere. With FMCG organizations utilizing the social media to engage with the customer; customer has the benefit of directly reaching out to the brands and come to a purchase decision (Virdi, 2013), while the organization has the opportunity to know about its customer and understand their behavior.

In this paper, 'digitalization or the web-based social networking stage alludes extensively to the reconciliation of advanced advances into consumer products, as in the accompanying definition: 'Digitalization: Integration of digital technologies into regular day to day existence by the digitization of everything that can be digitized' (Businessdictionary.com 2014), 'digitalization' is not a new phenomenon in retailing of consumer products; without a doubt, it has been an important piece of retailing—and changes in retailing—since at any rate the 1970s (Watson, 2011) obviously, digitalization isn't a totally new marvel on the buyer side, either. With the development of PCs in homes and the expansion in various types of digital devices, internet advances, and so on, the change has been in progress for a considerable number of decades. In this manner, in spite of the fact that consumer products and buyers recently experienced digitalization moderately, freely of each other, it presently includes the retailer-customer interface undeniably (Erdogmus & Cicek, 2012).

Accordingly, attempt to further investigate how empirical evidences are found, discussing the role of social media marketing with special reference to the emergence of online technology and its influence upon consumer products is significant. Paper followed a deductive approach and this paper attempts to review the current scholarly on social media marketing literature and research, including its beginnings, current usage, benefits and downsides, and best practices (Poncin & Mimoun, 2014; Stein & Ramaseshan, 2016; Pantano, 2016). It has attempted to review empirical thoughts as an organized content on how Social Media Marketing is becoming the latest and popular trend as a digital platform for social interaction between virtual communities in different faces. Finally, this paper attempts to conclude the main remarks whilst proposing key insights for the future research directions (Taylor, 2016).

Literature Review

Social Media Platform

The making of social networking sites like MySpace in 2003 and Facebook in 2004 prompted the popularity of the term 'social media'. The term 'Web 2.0' was likewise first utilized around this time to portray the new utilization of the internet as a stage where content was not made any more and published by people, yet is consistently changed by numerous users in a participatory and community-oriented way (Kaplan & Haenlein, 2010). Web 2.0 led to the

presentation of community-oriented activities, Wikis and intuitive websites; thus, encouraging the formation of client systems, and the progression of thoughts, information and knowledge among users (Constantinides, 2014).

User Generated Content (UGC) refers to media content that is freely accessible and made by end-users (Kaplan & Haenlein, 2010) and, as per OECD (2007), it ought to have been created outside expert schedules, without a commercial market context. The last refers to the content creator; the subject of the UGC can be (and regularly is) a business product or service with respect to which the discussants volunteer their opinions. From these ideas of Web 2.0 and UGC, online networking can be characterized as a group of internet-based applications that build on the ideological and technological foundations of Web 2.0 which allows the creation and exchange of UGC (Kaplan & Haenlein, 2010). Online networking can be arranged into: Collaborative projects (Wikipedia, web journals), content communities (YouTube), interpersonal interaction (Facebook), virtual game worlds (World of Warcraft), and virtual social worlds (Second Life) (Kaplan & Haenlein, 2010). These days, online business and expert survey locales also accommodate UGC, for example, Amazon and dpreview.com.

As indicated by (Kaplan & Haenlein, 2010), social media is "a gathering of internet-based applications put together that works with respect to the ideological and the innovative establishments of web 2.0 and it permits the creation and exchange of user generated content." It simply refers to the online technologies and practices which people, associations and organizations use to share information and opinions. This definition is insisted by Wall & Williams (2007); Schröder & Hölzle (2010), who speculate that social media is a social conglomeration. In light of this, online life as per the definition referred to by Wall and Williams (2007), and Tsimonis and Dimitriadis (2014), exude from the initial's discussions outfitted towards general opinions within a specified time, for the most part long enough joined by adequate human feeling, which thus bring about close to personal relationship inside the cyber space. Another conceivable clarification of web-based social networking use, is that it contains a more extensive scope of web-based applications yet it is for the most affiliated with applications, for example, YouTube, Facebook, Wikipedia, and Instagram. Notwithstanding the advantages to online life advertisers and consumers straightforwardly, it is less expensive in its activity and less time consuming (Kaplan & Haenlein, 2010), it influences customer behavior and observation, just as uniting to classifications of like-minded people (Ernst & Young, 2011).

By early 2017, Sri Lanka had more active cell phone memberships than individuals (124 for each 100 people), and around 30% of the populace was utilizing the Web. As Web is never confined to the urban areas or to those with English capability, as it was during the early years, the social change has assembled pace. The genuine game changer is the spread of cell phones, the gadget through which a greater part (over 75%) of the nation's 6 million internet users get on the web. As per a research done by the Sabaragamuwa University of Sri Lanka, a survey including 1000 persons showed that among the sample users, 74% of them use social networks, 11% of them use media sharing, 9% of the users use micro blogging and 2% of the users use blogs, micro blogs and social news (Thuseethan, 2015). With the issues of essential availability and access gradually dialing down, society currently faces a more complex and a nuanced set of post-availability challenges (Ranasinghe & Dharmadasa, 2013). These incorporate improving computerized education; upgrading locally relevant substance; guaranteeing appropriate specialized models for web and advanced applications; tending to gender orientation in computerized innovation and web use; shielding singular security and assurance of web based information; upgrading digital security at individual and institutional dimensions; and containing electronic reconnaissance (Cooray, 2016).

However there is no slowing down of the growth of internet use. It took 17 years for the number of internet subscribers to pass 1 million (in 2012), since then, growth has been much faster. By June 2017, the TRCSL reported a total of 1,060,529 fixed internet subscriptions (both narrowband and broadband), and another 4,418,799 mobile broadband subscriptions. This produced a total of 5,479,328 Internet subscriptions in the country. As some accounts are used by more than one person, it can be assumed that at least around 30% of the population (6.25 million) were regularly using the Internet in Sri Lanka by June 2017 (Ranasinghe & Dharmadasa, 2013).

Consumer Products in Social Media Platform

Consumer goods is a generalized term for any product or service purchased primarily for personal, family, or household uses. Consumer goods such as clothing, foodstuff, or toys are intended to satisfy human wants and needs through their direct consumption or use. Consumer goods can be characterized in various ways; depending on the frequency and duration of the product's usage, the classifications of durable goods, semi durable goods and nondurable goods can be distinguished (Filo, Lock, & Karg, 2015) According to their usage, many goods (e.g., cars, printers, or personal computers) can be categorized either as consumer goods or as industrial goods. The term consumer traditionally refers to the ultimate user of products, ideas, and services. Strictly speaking, a distinction can be made between consumers and customers. (Ashley & Tuten, 2015). A customer is the person or organization who buys the product or service and pays the price for it, whereas a consumer is the person who uses the product or service. In everyday language, the term consumer is frequently used to characterize the buyer or decision maker. A mother who buys semolina pudding for the consumption of her small child is often called 'the consumer', although she is not the ultimate user. (Singh & Sonnenburg, 2018).

Social media has given an entirely different arrangement of chances for consumers to take part in social interaction on the web. Social media is utilized by customers for different reasons, for example, to produce content, take part in online networks and to connect with different customers. As indicated by Lu, (2010) advancements in the web in the ongoing years has made various new frameworks accessible to organizations: social media as online networks are one genuine example. In this time and age, buyers approach different sources of data and encounters which have been ordered utilizing other clients' data and suggestions (Severi, Ling, & Nasermoadeli 2014). Mayfield (2011), clarifies this is a significant factor as the client presence through online life is a significant favorable position in marketing.

With the development of Information and Communication Technology (ICT) traditional mass media has been substituted by social media, (Chandrasekara, 2013). The quantity of overall social media users is required to achieve one third of the total populace (for example more than three billion month to month dynamic online networking clients) by 2021; this expanding number of client records is joined by a development in user engagement, as web clients spend a normal 135 minutes out of each day on informal organizations (Statista, 2018). Internet based life represented very nearly 35 percent of global digital spending in 2017, contrasted with 23 percent in 2013 (Statista, 2018). The main online networking webpage is Facebook with more than 2.2 billion month to month dynamic clients worldwide as of April 2018, followed by YouTube (1.5 billion) and WhatsApp (1.5 billion) (Statista, 2018).

Thus, an ever-increasing number of consumer brands have included Social Media Marketing (SMM) in their advertising procedures to receive the rewards of the computerized wave. Where by it is characterized as the procedure that enables promotion of websites, products and services by means of online social channels (Weinberg, 2009), SMM is identified with relationship building and making associations with the consumers – current or potential

(Erdogmus & Cicek, 2012). With activities, for example, blogging and sharing instructional videos and photographs of products via web-based networking media stages, the focal point of SMM activities are content brands, correspondence, effort and referral to expand web traffic, awareness and popularity of brands (Kim & Ko, 2012). In addition, the development in the utilization of online life and rise of social hunt is assuming a focal job in consumer brand communications and commitment (Kim & Ko, 2012; Laroche, 2013).

Social Media and Consumer Products in the Sri Lankan Context

Sri Lanka's digital change has been in progress for a long time. It started during the 1980s when personal computers started entering workplaces and homes. It assembled pace after the presentation of cell phones in 1989 and business internet providers in 1995. The nation was the first in South Asia to change its telecom area. Those changes, started in the mid-1990s, finished the decades-long state imposing business model and made an aggressive market with various operators and vital guidelines. (Cooray, 2016)

However, there is no slowing down of the growth in the use of internet. It took 17 years for the number of Internet subscribers to pass 1 million (in 2012). Since then, growth has been much faster. By June 2017, the TRCSL reported a total of 1,060,529 fixed Internet subscriptions (both narrowband and broadband), and another 4,418,799 mobile broadband subscriptions. This produced a total of 5,479,328 Internet subscriptions in the country. As some accounts are used by more than one person, it can be assumed that at least around 30% of the population (6.25 million) were regularly using the internet in Sri Lanka by June 2017 (Rathnayake, 2013).

With a phenomenal growth of mobile broadband connections and rapidly increasing fixed internet connections, Sri Lanka is fast establishing itself as a potential regional ICT hub. According to the statistics released by the Telecommunication Regulatory Commission of Sri Lanka (TRC) as indicated in Table 1, the number of mobile broadband connections has doubled each year since their introduction in the year 2009, registering an average growth of nearly 96.5% during the past six years. The fixed internet connections have registered a praiseworthy growth of 68% although it hasn't seen as phenomenal a growth as mobile broadband connections have (Sri Lanka National Human Development Report, 2014). Sri Lanka is a 21 million strong population being served by five mobile service providers. In fact, Fitch Ratings in their last year's report named Sri Lanka as one of the most crowded telecom markets in Asia while predicting a possibility of a merger between the weak market players to provide innovation and facilitate de-regulation. (Sri Lanka National Human Development Report, 2014).

Everybody who goes online does not utilize internet-based life, yet many do. Facebook is the most well-known web-based social networking stage in Sri Lanka, with the all-out client number surpassing 5 million by end 2016. A quarter of online social media users follow their favorite product or brand in their social network. Among them 80% of them follow the company or brand pages on Facebook. Therefore, having presence on Facebook makes brands discoverable and connected (Sirimane, 2017). Other internet-based life stages, for example, Twitter, Instagram and Snapchat have essentially fewer client numbers, but at the same time are becoming popular.

The Sri Lankan consumer product industry, prestigious as a multi-million cash area is being ruled by Unilever Sri Lanka and Hemas Property with the assembling and circulation of a huge scope of FMCG brands (Kahadawarachchi, Dissanayake & Maitra, 2016; Keller, 2012). Those items which are known to leave the racks "quick", are arranged as food and beverages, family unit and individual consideration items. Individual consideration items can again be

classified into five kinds in particular, hair care, healthy skin, cosmetics, fragrance and oral consideration while Unilever Sri Lanka claims the highest number of brands while LMRB (Lanka Market Research Bureau Business) panel information, additionally shows it as the most astounding month to month deals generator for the organization. Henceforth accordingly, the correspondence of explicit budgetary allocation for individual consideration items are highest compared to the other two classes (Cooray, 2016). Subsequently, the organizations consider the viability of the showcasing correspondence exercises on a definitive buy choice as a prime factor. (Kahadawarachchi, Dissanayake & Maitra, 2016; Keller, 2012).

The development of internet advancements extraordinarily sways on the buyer's day to day activities and numerous offline activities which have now moved to the online condition. In this light, online retail shopping has evolved in to the mainstream sphere and furthermore has become an essential piece of consumer life. As indicated by the most recent studies, during the year 2016, internet penetration of Sri Lanka had expanded by 30% and web clients has increased up to 6.1 million particularly because of the accessibility of a few connection alternatives, for example, mobile choice, broadband choice and dial-up choice. This greatly affects the life of Sri Lankans' and numerous online activities have expanded especially the presence via social media networking and internet business (Colombo Computerized Advertisers, 2017). Besides, as per an ongoing thorough report distributed by Kayamu, e-commerce exchanges in Sri Lanka are required to be developed by over 72% sooner rather than later (Khan, 2017). It has additionally been demonstrated that Sri Lankan online customers are increasingly becoming keen on looking for and purchasing retail items for their regular needs. Against the development of Web penetration and web-based business activities, it is essential to recognize the variables impacting on the 'web buy goal' in online retail shopping, since web-based purchase intentions have moved basically towards online retail shopping (Khan, 2017). The significant contrast between —on-line and —off-line buyer conduct, is the technology. Therefore, in order to buy products and services online, customers need to communicate with the innovation and while off line clients don't. In this specific situation, the physical shop condition is supplanted by the electronic shopping condition or because of information Frameworks (Blackshaw and Nazzaro, 2004).

Discussion

With progression in technology and the combination of worldwide information into effectively accessible stages, customers these days can associate with any product/brand utilizing various channels. Every one of these channels go about as a hub and add to customer experience, which thus turns into a part of commitment resulting in customer engagement (Dissanayake, Siriwardana & Ismail, 2019). With smart mobile phones and handheld gadgets turning into a rage, clients engage themselves with any organization and its product/brand through a number of devices. Regardless of the phases of customers' behavior; customers connect with himself/herself digitally at all stages. Regardless of whether, it is the phases before buying, for example, awareness and consideration or post purchase phases of satisfaction and feedback. (Priyadarshane, 2014)

When a firm has chosen to engage with online networking, it needs to characterize, actualize and catch up on specific activities on the selected social media. Well known activities are the creation of competitions which will offer clients fans and prizes, communication with the clients, announcement of new products or services, arrangement of advice and helpful information, and a first degree of customer care (Chan & Ngai, 2011). Every one of these activities ought to be as per other online and offline marketing exercises that the firm may have and make cooperative energies among them.

Organizations anticipate various specific advantages from their presence via social networking media. Customer engagement was referenced as the most significant one. The development of the idea of customer engagement, recognizes the opportunities offered by the interactive aspects of Web 2.0 innovations and instruments to change the connection among clients and venders. Its significance has essentially been recognized by experts trying to misuse social media to build enduring social trades with strong emotional bonds and improve business performance (Mitic & Kapoulas, 2012; Pagani & Mirabello, 2011; Sashi, 2012). Numerous organizations have additionally thought about 'word of mouth' as a significant advantage. This finds numerous specialists in total agreement – they accept that web-based social networking is a useful asset that can assist an organization with becoming better known, and can take the most persuasive form of promotion (Kumar, 2007), "word of mouth," to a worldwide level (Burrus, 2011). Online networking, operate like a giant word-of mouth machine, catalyzing, and quickening the alleged viral distribution of information (Chan & Ngai, 2011; Dellarocas, 2003; Godes & Mayzlin, 2004; Jalilvand & Samiei, 2012). These systems are amplifiers, piggybacking on client word of mouth while coordinating with content that is more noticeable than different types of web-based advertising (Neff, 2010). However, firms ought to be careful; these equivalent mechanisms can spread outrage, discontent, and ridicule just as rapidly. Checking of client exchange yields market knowledge and lets an organization enhance positive messages, right errors, and alleviate damage. Obviously, a definitive objective is to expand sales, be it through new client acquisitions, expanded consumption, or up-or cross selling.

Despite the fact that the rise (and fall) of different sorts of social media platforms has been significant for understanding the social media landscape, the reason for this paper is to understand the current circumstance of web-based life, at any rate from a marketing point of view, lies more in what the clients do on these platforms than the technologies or services offered by these platforms. Currently, individuals around the globe utilize web-based social networking in its different structures (e.g., news sources on Facebook and Twitter, private messaging on WhatsApp and WeChat, and conversation discussions on Reddit) for various purposes. These can be generally sorted as (1) digitally communicating and associating with reference to other people, for example, family and friends (2) doing likewise however with unknown others yet who share common interests, and (3) getting to and adding to computerized substance, for example, news, gossip, and user generated product reviews (Godes & Mayzlin, 2004)

All of these cases are basically WOM in some structure. This, in any event, is the manner by which marketing researchers have mainly characterized social media, as examined by Lamberton and Stephen (2016). For sure, online WOM has been—and, battle, will keep on being—significant in marketing (e.g., in the meta-examination by Babić Rosario et al. 2016 the authors found, a positive connection between online WOM and sales). The current viewpoint via social networking media is that individuals use it for creating, accessing, and spreading data through WOM to different sorts of others, be it known as “strong ties” or “weak ties” in their systems or unknown “strangers”. Some extended research has looked at online life from the WOM point of view of the results of the transmission of WOM (e.g., creating a Facebook post or tweeting) on others (Herhausen ,2019; Stephen & Lehmann 2016), the effect of the type of WOM content shared on others' behavior (Villarroel Ordenes , 2017; Villarroel Ordenes, 2018), and on the inspirations that drive consumer posting via social media, including considerations of status and self-introduction (Grewal, 2019; Hennig-Thurau, 2015; Hollenbeck & Kaikati 2012; Toubia & Stephen 2013; Wallace, 2014).

Conclusion and Future Directions

Taking everything into account, research has established that retailers can expand attention to their brand by being creative while connecting with customers social media sites. "As more customers are utilizing web-based social networking (e.g., Twitter, Facebook, MySpace, and LinkedIn) and depend on them for marketing shopping choices, advancement through these media has got important" (Shankar, 2011). As indicated by Curran, (2011), social media sites, for example, Facebook is better than other promoting avenues since it stores information on the entirety of its users subsequently guaranteeing marketing reaches at a seller's particular target market. Internet based sites are an extraordinary stage for sellers / organizations to make an encounter and can utilize information put away via social media sites to improve user involvement in their brand (Villarroel Ordenes, 2018).

Besides, Hill, Provost, and Volinsky's (2006) research sets up that a firm can profit from social networks to foresee the probability of purchase intention. This should be possible by considering a company's choice of network (for example Facebook, Instagram, Pinterest and so on.) and by looking at that system's information. Analyzing a network's information generously improves an organization's promoting endeavors since it gives the organization fundamental information on the network's users, which decides the best internet-based life strategies for that specific site (Hill, Provost, and Volinsky's 2006). In view of this investigation, it can additionally be contended that knowing which social media sites, an organization's target market uses, is another key factor in ensuring that web-based advertising will be effective.

Since social media sites can be misused for the information it furnishes on consumer behavior with respect to their buying expectations, research further proposes that organizations should incorporate social media networking sites into their plan of action or promotional mix (Siriwardana, & Dissanayake, 2018). A business model is an arrangement of mutually dependent structures, activities, and procedures that fill in as a company's organizing logic and create value for clients, itself, and its partners (Sorescu, 2011). Mangold and Faulds (2009) suggest that internet-based life ought to be viewed as an integral part of an association's integrated advertising methodology and should not be messed with. As Curran, (2011) points out, right around 1 in each 13 people on the world is a functioning Facebook client, which focuses on the capability of finding a prepared market for any product or service.

Social networking sites are being used to upgrade an organization's brand offer and increase their target market in light of the fact that "new technologies consider progressively more personal, directed communications, just as expanded buyer participation in the production of marketing and brand related data"(Bilton, 2014). Yurieff in 2018 stresses that traditional communication models, which depended on the classic promotional mix to make integrated marketing communications, must offer a way to another paradigm that incorporates all types of web-based social networking as possible tools in planning and executing integrated marketing communication procedures. Organizations are focusing with regard to social media since it gives a key part that organizations have battled to gather for quite a long time: feedback (Lovejoy 2017). Feedback from buyers has consistently been significant with regard to product, brand, and development of the business model. Since, most studies have analyzed social media marketing, regarding proposing how to consolidate it within a business plan strategy, and how to measure buyers' reactions, it is significant that further research addresses which methodologies work. Although a few examinations have begun to address impacts and factors that influence consumers' reactions, past research doesn't obviously state if social media advertising is significant to organizations' as far as the degree of profitability (Villarroel Ordenes, 2018).

This examination is a fundamental attempt to see how consumer brands utilize the accessible social media channels and how they expect to profit by them. It still finds challenges on consumer adoption to digital business applications, thus firms should be strategic in digital business strategy execution to get more consumer involvement (Rassool & Dissanayake, 2019). Given the subjective nature of the current studies and the way that internet-based life is an emerging field of exploration which is consistently developing, discoveries should be considered as exploratory. Despite the fact that the well-known and successful brands with a solid presence in online networking spread an assortment of market sectors, organizations from more areas should be reached to give a superior grounded perspective on firms' social media activities. Additionally, a longitudinal assessment of social media practices is required, so as to see how firms alter their methodologies over time.

Numerous organizations consider customer engagement in consumer goods as a significant advantage emerging from their activities in social media. It has likewise been perceived as a key research priority of the Marketing Science Institute (Bogost 2018). Hence, thinking about the expanding number of individuals investing increasingly more energy in social media, it is significant to study customers' engagement in this unique situation (Perry 2018). Customer engagement is accepted to be directly and positively identified with various relationship results, for example, satisfaction, trust, full of affective commitment, and loyalty (Schwarz & Newman 2017). A future empirical measurement of the effect of commitment on the perceptions and perspectives toward the brand will assist managers with better planning and execute their online networking procedures / strategies.

Further in this point of view, there is no real examination of the clients' side about their activities and their intentions in participating in a brand's social media fan page. While firms accept that clients are getting connected with consumer brands through online networking collaborations, literature suggests that customer engagement in consumer goods should lead to perceived relationship advantages of participating in a brand community (Mitic & Kapoulas, 2012). By concentrating how customer engages with online life, might be identified related to relationship benefits, one will have the option to comprehend what clients look for from such relationships using social media and if such relationship-building efforts are successful. Future research should concentrate on what relationship benefits, clients hope to pick up and what benefits are really perceived from their involvement with social media as a part of their relationship with an organization. For example, customers may gain— the so far disregarded from an online context – social advantages (Colgate et al., 2005; Yen and Gwinner, 2003), and useful information benefits (Dholakia, 2004) by taking part in community practices. All things considered, purchasers experience different sorts of relationship benefits, for example, entertainment benefits. Another effective issue identified with the utilization of social media by an organization concerns the risk of such use and its likely negative comments. These risks incorporate the uncontrolled and unpredictable behavior of brand fans via social media, the handling of negative remarks, bits of gossip, and word of mouth, etc. While the current studies talk exclusively about how social media can influence customer brand connections, an extension of the effect of the utilization of different social media at a public policy and society level would be an interesting future heading.

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The Impact of Social Media Marketing on Purchase Intention of Connected Consumers: A Study Based on Natural Ingredient-Based Personal Care Products

Subasinghe, U.¹ and Weerasiri, R. A. S.²

Personal Care has become a daily ritual for most individual's world-over. With this widespread flair towards personal grooming, the search for natural remedies and natural ingredient-based products for personal care has also grown due to the health-conscious nature of most consumers. Within this context, the purpose of this paper is to examine the impact of social media marketing on the purchase intention of connected consumers towards natural ingredient based personal care products. Furthermore, 'Perceived Trust' is positioned as a mediator within the context of this study to enhance the understanding of whether perceived trust contributes to mediate the relationship between 'Social Media Marketing' and 'Purchase Intention'. The 469 responses collected from Colombo and Gampaha districts using a structured questionnaire were analysed using SPSS to conclude that social media marketing directly has a significant positive impact on purchase intention while perceived trust mediates the relationship between 'Social Media Marketing' and 'Purchase Intention'. The researcher was also able to confirm the significant positive impact of social media marketing on perceived trust as well as the significant positive impact of perceived trust on purchase intention and that social media marketing has a greater impact on the purchase intention than it does on the perceived trust.

Keywords: *Connected Consumers, Perceived Trust, Purchase Intention, Social Media Marketing.*

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¹ Unilever Sri Lanka Limited. (Uthpala.Subasinghe@unilever.com)

² University of Kelaniya, Sri Lanka. (sudath@kln.ac.lk)

Introduction

The instinctive feeling of people to ‘look and be the best version’ of their own selves today, has led to the growth and development of the Personal Care Industry in Sri Lanka and across the world. The regulatory landscape which is constantly evolving as well as the technological developments, advancements and improvements drive this industry to offer the best products and solutions to their clientele. It has also become crucial in the industry to innovate, that will ultimately result in developing new personal care products successfully. The industry is constantly challenged to market safe, effective and compliant products that are not only in line with the legislative requirements but also conforming to the expectations and demands of their customers. But, especially within the category of natural personal care products, consumers are increasingly finding it difficult to find safe and trustworthy natural personal care products that conform to the marketed information. With the market being saturated continuously, it is quite visible that most brands or products do not stick to their side of the bargain, having marketed the quality and the safety of the products. Due to this reason, most consumers find it as a problem to choose the most suitable and safe natural personal products they can trust on.

In a world of 7.75 Bn people, there are 5.19 Bn of unique mobile phone users out of which 4.54 Bn are internet users (Hootsuite, 2020). 3.8 Bn people belong to the group of active social media users and the growth of this group is 9.2% annually (2019-2020) (Hootsuite, 2020). In Sri Lanka, there’s a 30% penetration of Social Media where out of a population of 21 Mn 6.4 Mn people are active social media users. As reflected by these statistics, Social Media can be seen as a platform that can be used to market such products effectively to the customers. But there’s a question as to whether such messages or information dispersed through Social Media actually impacts the purchase intention while also contributing to generating a sense of trust towards such information. This is exactly the conundrum addressed via this study.

Problem Statement: Within this context, this study aims at discovering the impact that, social media marketing has on the connected consumer’s purchase intention towards natural ingredient-based personal care products in Sri Lanka and how is the purchase intention being affected.

In the quest for proper literature sources, one of the clear identifications was that, studies particularly in line with the study under consideration, are very limited. The currently available theories are insufficient or lacking, to explain the problem elaborated above. Hence there’s a very visible *literature or theoretical gap* especially in the context of Sri Lanka, which also reflects the lack of *empirical data*. As per the problem pointed above, which is expected to cater during the course of this study, the following objectives were identified for the facilitation of addressing the problem with specific reference to the impact social media marketing has on the purchase intention towards natural personal care products of connected consumers.

Main Objective: To examine the impact of social media marketing on the purchase intention of “Connected Consumers” towards natural ingredient-based personal care products.

Sub Objectives:

- To identify the impact of Social Media Marketing creating consumer trust, on the customer’s purchase intention towards natural ingredient-based personal care products.
- To identify the impact of Social Media Marketing on the connected customer’s perceived trust.

- To identify the impact of Perceived Trust on the customer's purchase intention towards natural ingredient-based personal care products.
- To identify whether Social Media Marketing has a higher impact on purchase intention or on perceived trust

Unveiled throughout the proceeding sections of this write up are, content areas contributing to address and achieve each of the aforementioned objectives.

Literature Review

Social Media Marketing

(Kannan & Li, 2017) discusses how social media is set apart from traditional marketing environment in terms of the “ease with which customers can share word-of-mouth information, not only with a few close friends but also with strangers on an extended social network”. Furthermore, (Chaffey, 2011) states that social media includes “boosting consumer relations on company's personal website or in the course of its social existence”. (Mangold & Faulds, 2009) has pointed out the composition of Social Media as including a “wide range of online, word-of-mouth forums including blogs, company-sponsored discussion boards and chat rooms, consumer-to-consumer e-mail, consumer product or service ratings websites and forums, Internet discussion boards and forums, moblogs (sites containing digital audio, images, movies, or photographs), and social networking websites”. Social Media, which is also known as “consumer-generated media” has resulted in material change in the tools and strategies for communicating with customers. According to (Maoyan, Zhujunxuan, & Sangyang, 2014), Social Media Marketing (also known as community marketing) can be defined as a kind of Internet marketing model, it points to achieve marketing objectives by participating in various Social media networks which usually involves tools such as Bulletin Board System, micro blogging, blog, Social Networking Service, pictures, videos and so on.

Purchase Intention

Purchase intention is considered as a key indicator to predict consumption behaviour (Keller, 2001). Schiffman and Kanuk (2004) has described purchase intention as a measure of the possibility of a customer purchasing or buying a particular product. As per (Beauty and Personal Care in Estonia, 2014), independent consumers, who know what they are looking for, use more online stores. Environmental consciousness and appearance consciousness positively influence attitude toward buying natural personal care products. Accordingly, retailers can develop effective marketing strategies emphasizing ecological beauty, product safety, and affordable prices to increase consumers' intentions to buy organic personal care products (Hee Yeon & Jae-Eun, 2011).

Connected Consumer

Razorfish (2009) has identified and discusses about the Connected Consumers in their report. Accordingly, they've shed light on the Connected Consumers as those who embrace social media and actively build their own trusted personal networks. Solis (2011) has put the connected consumers into perspective by calling them as Generation C who are multitasking and multi-screen savvy, always on, engaged in a cross-platform way, mobile, predominantly female, connected, different and empowered. Understanding what Connected Consumers want and acting upon them can give rise to a number of opportunities. Constant connectivity is the new state of being for connected consumers (Hyder, 2018).

Perceived Trust

The belief that allows consumers to willingly become vulnerable to Web retailers after having taken the retailers' characteristics into consideration. (Pavlou, 2003). Chang, Kuo, Hsu, & Cheng (2014) in their research has confirmed that purchase intention is positively influenced by perceived trust.

Social Media Marketing, Perceived Trust and Purchase Intention

Social Media being a two-way communication platform is considered to be perfect with special relation to sharing information and opinions within the digital arena. Within the context on social media, since it tries to convey what the brand is without attempting to control the brand's image like most other marketing communication platforms, communication through social media is considered to be more close to heart and sincere. This results in improved favourable attitudes towards brands which in turn contributes to stronger commitment and purchase decision making processes (Hutter, Hautz, Dennhardt, & Fuller, 2013). Furthermore, Kim & Ko (2010) confirms the influence of social media marketing on purchase intention. It is evident from literature that trust impacts consumers' desires or intentions to purchase. For instance, Kian, Boon, Fong, & Jian (2017) states that trust has a positive influence on purchase intention of consumers on social networks. Among the various elements studied such as rewards, interaction, entertainment, electronic word of mouth, trust and satisfaction, (Sanjeev Bansal & Gupta, 2020) concludes that trust has the maximum effect on consumer purchase intention. Manzoor, Baig, Hashim, & Sami (2020) also shows that social media marketing has a greater influence than trust in purchase intentions through social networking sites. Social Media Marketing activities exert a direct positive significant impact on brand trust (Ebrahim, 2019).

Conceptual Framework

After an extensive reference to previous literature, both academic and commercial, the following conceptual framework has been developed to guide the direction of the study to achieve the specific objectives. As depicted in the conceptual framework below, the independent variable can be identified as Social Media Marketing while Purchase Intention stands as the dependent variable. As correctly reflected in the framework, the aim of this study is to assess the impact of social media marketing on purchase intention while also looking into the impact of perceived trust as a mediator within this relationship. (2018 Digital Marketing Plans: Survey Summary Report, 2017) has indicated Social Media Marketing (18%), Content Marketing (17%), Marketing Technology (16%) and Search Engine Optimization (15%) as the most effective tactics used in a digital marketing plan. As backed by (State of Inbound, 2014) for Social Media Marketing to be the most effective, the current study focusses on understanding the impact of social media marketing within the relationships highlighted below.

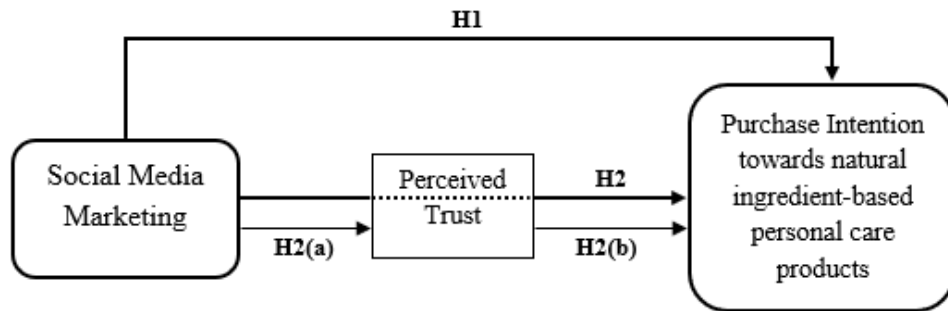


Figure 1: Conceptual Framework

Source: Author Developed

Hypotheses

The researcher has generated the following hunches or hypotheses based on the foundational framework provided by the conceptualization reflected in the figure above.

Hypothesis 1 (H1): There is a significant positive impact of Social Media Marketing on the purchase intention of consumers towards natural ingredient-based personal care products.

Hypothesis 2 (H2): The impact of Social Media Marketing on the purchase intention of consumers towards natural ingredient-based personal care products is affected by Perceived Trust.

H2(a): There is a significant positive impact of Social Media Marketing on the connected consumer's perceived trust

H2(b): There is a significant positive impact of Perceived Trust on the customer's purchase intention towards natural ingredient-based personal care products

Methodology

Within the course of this quantitative research, deductive approach has been embraced. The researcher follows a deductive approach as it has a well-established role for existing theory: it informs the development of hypotheses, the choice of variables and the resultant measures. This theory is expressed in the form of hypotheses which are then tested (Malhotra & Birks, *Marketing Research: An Applied Approach*, 2007). The research at hand adapts a Mono Method, as the researcher intends to combine a single quantitative data collection technique: a self-administered questionnaire, with quantitative data analysis procedures. While secondary data was sourced from existing literature, both commercial and academic, primary data was collected by means of a structured questionnaire and the survey was conducted among 469 connected consumers within the ages of 15-60. The collected data is analysed by employing quantitative analyses such as simple regression and process model for mediation for the purpose of testing the hypothesis using IBM SPSS Statistics 23.0 to reach meaningful conclusions.

Sampling

As highlighted in a couple of areas in the content above, Connected Consumers are a key within the digital arena of marketing. Hence the study has been focussed on studying the perceptions of the said category of consumers. The Target Population of this research study can be defined as "Connected Consumers" who use or expect/ prefer to use natural ingredient-

based personal care products. In the Sri Lankan context, as per (Digital Sri Lanka, 2019), the Total Population is 20.98 Million whereas the Total number of Active Internet Users amount to 7.13 Million. The report also states that the Total Number of Active Mobile Internet Users comes to 6.55 Million which is nearly 31% of the Total Population. It is befitting to use the 6.55 Million of Active Mobile Internet Users as the Target Population of the study at hand, since the researcher attempts to conduct the study within the population category of “Connected Consumers”. Hence the Total Number of Active Mobile Internet Users would be a decent reflection of Connected Consumers. As per Economic and Social Statistics of Sri Lanka (2017), the population composition of each of the districts in Sri Lanka has been categorized as Urban, Rural and Estate. In terms of these three sectorial categorizations, the main focus of this study will be on the urban population, as the urban sector has been accounted for as having the highest rate of digital literacy, amounting to 53.9% whereas rural and estate sectors report 38.4% and 18.7% respectively (Computer Literacy Statistics – 2018 (First six months), 2018). Furthermore, Computer Literacy Statistics (2018) has also stated that the highest level of computer literacy is reported from the Western province with a percentage of 36.1%. The report has also indicated the Computer literacy rate by district, where the highest rates are reported from Colombo, Gampaha and Kandy with percentages of 42.6%, 32.9% and 34.8% respectively. Due to the time and resource restrictions for the study at hand, the researcher chooses to proceed with the Colombo and Gampaha districts to conduct the survey. An online survey in the form of a structured questionnaire is anticipated to be duly completed by 469 respondents. The population of this research can be defined as any “connected consumer” who uses or expects/ prefers to use natural personal care products using at least 1 smart device such as a tablet, mobile, laptop etc. (hence the sampling frame can be identified as individuals within the ages of 16 to 60, using at least one smart mobile device). The sample that will be taken for the purpose of the research is expected to be in the outskirts of Colombo and Gampaha district, so that it will facilitate the generalization of the research findings for these areas in particular, which is also composed of majority of young, young adult, and adult working crowd that are more digitally savvy. Therefore, it’ll be based on a non-probability sampling technique. More specifically, a judgmental sampling (also known as selective, purposive sampling) is adopted as the research involves a qualifying question which is whether the respondent uses at least one digital or smart device. This sampling technique was also suggested to be more appropriate for this study by a senior academic lecturer who has specialized in the Research arena as well, where we select the respondents according to the purpose of the study under consideration. If the respondent, chosen randomly through probabilistic sampling procedures do not actively use a smart mobile device, such responses will be bogus within the context of this research as the researcher attempts to understand the behavior of connected consumers within this study. Hence if such a procedure was to be used, considerably a large sample would have to be studied, while allowing for invalid responses. As evident from the above explanation, it was not viable for the researcher to opt out for a probability sampling technique, while also taking into consideration, the time and resource constraints. The choice of non-probability sampling is also evident in the works of (Omar, Nazri, Osman, & Ahmad, 2016), (Leila & Zohra, 2018), (Lee, Goh, & Noor, 2019), (Slamet, Nakayasu, & Bai, 2016), (In & Ahmad, 2018), and within many more literature based resources. Accordingly, the researcher has to select the appropriate respondents who are using at least one digital mobile device and thereby collect the responses from them. Furthermore, due to the lack of information or resources to derive the population size and the scope within the context of this research: connected consumer’s purchase intention towards natural ingredient-based personal care products, and due to the limited time and resources at disposal, the researcher has opted out for convenience sampling. A sample element, i.e. an individual respondent in the sample should ideally be in the age category of 16 – 60, either male or

female having access to at least one digital mobile device. The sample size of the research is 469 respondents and the primary criteria considered in selecting these respondents is identifying whether the respondent is a “Connected Consumer”. The sample size I intend to take for this research can be rationalized through the citation of the sample sizes adapted for previous researches done on similar areas of study. Accordingly, the details of such studies have being compiled into the following table.

Table 1: Representation of the Sample Sizes pertaining to related researches

Title	Author(s)	Research Method	Sample Size	Year
Effective Factors on Purchasing Intention of Cosmetics and Health Products in Tehran City	<ul style="list-style-type: none"> • Reza Azizpour • Tayebah Abbasnejad • Malihe Siyavooshi 	Quantitative	410	2016
The Influence of Beauty-Related YouTube content on Consumers' Purchase Intention	<ul style="list-style-type: none"> • Kyungji Lee 	Quantitative	427	2018
A study of green purchase intention comparing with collectivistic (Chinese) and individualistic (American) consumers in Shanghai, China	<ul style="list-style-type: none"> • Lingyun Chen 	Quantitative	400	2013
Factors stimulating content marketing	<ul style="list-style-type: none"> • Naser Azad • Seyed Mohsen Seyed AliAkbar • Sima Zomorodian 	Quantitative	400	2016
Social Media Advertising/Marketing: A Study of Awareness, Attitude and Responsiveness by Nigerian Youths	<ul style="list-style-type: none"> • Nkiru Esther Otugo • Chikezie Emmanuel Uzuegbunam • Chinedu Okey Obikeze 	Quantitative	400	2015
Assessing Customer Perceptions of Website Service Quality in Digital Marketing Environments	<ul style="list-style-type: none"> • Yi-Shun Wang • Tzung-I Tang 	Quantitative	260	2003

The Importance of Friends' and Family Members' Influence and Subjective Norm in Propelling Individual's Intention to Purchase Halal Personal Care Products	<ul style="list-style-type: none"> • Sulaiman Bin Nawawi • Rosmimah Bt Mohd Roslin • Norlida Bt Abdul Hamid 	Quantitative	450	2018
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Data Collection

Data collection took place in the form of a structured self-administered questionnaire incorporating a five-point Likert scale, dichotomous questions, and other forms gathered the data required for the research. The structured questionnaire is expected to generate sufficient primary data to examine the impact of social media marketing tactics on the purchase intention of consumers for natural personal care products. And secondary data was also collected for this research through referencing literature to get a background understanding and set a theoretical foundation for the study under consideration. Majority of the responses for the research is expected to be collected through a google form, which will be shared among a network of people from different age categories, while also collecting data through the distribution of a physical questionnaire at certain places or locations (MBA and DBA lectures, Undergraduate Lectures, Tuition classes, Physical Exercise classes, Government offices etc.) targeting specific age groups. This questionnaire was circulated, and the researcher obtained 469 responses from connected consumers within the ages of 15-60.

Data Analysis

Data pertaining to the hypothesized relationships have been run on insight generating statistical procedures such as correlations, simple regression, process model for mediator analysis that will be utilized within the analysis to generate results for and address the hypothesized relationships. The data collected through the questionnaire has been fed to the SPSS statistical software package manually, for a more comprehensive and convenient data processing and analysis that is automated/ generated by the software. Below is an overview on the results generated through the data analysis of the study.

Data Analysis and Interpretation

The researcher attempts to unveil a comprehensive analysis of the data collected within the course of this section as the researcher tries to build on the analysis to investigate the nature and the intensity of the relationship between the variables studied under this research. The collected data was analysed using IBM SPSS Statistics 23.0.

The demographics of the sample reflects that 56.1% and 43.9% of the sample of the research is represented by Females and Males respectively. Out of all the respondents who took part in the survey, the 15-34 age category represents the highest percentage of 74.4% whereas the 35-60 age category represents 25.6% of the sample. This age distribution also coincides with the Digital Literate population rates/percentages reported by (Department of Census and Statistics Sri Lanka, 2018), where more than 50% of the 15-34 age category was reported to have digital literacy whereas less than 50% of the 35-60 age category was reported to have digital literacy. 34.8% of the respondents are University Undergraduates, 31.6% are Private Sector Employees, 19.8% are Government Sector Employees, 4.5% are Self-Employed while 2.3% fall into the category of 'other'. Higher percentage of the respondents were within the income bracket of more than Rs. 55,001.

Descriptive Statistics

Table 2: Summary of Descriptive Statistics

		Avg_SMM	Avg_Per_Tru	Avg_PI
N	Valid	469	469	469
	Missing	0	0	0
Mean		3.4847	3.1314	3.1514
Std. Error of Mean		.02856	.01996	.03319
Median		3.5000	3.1250	3.0000
Mode		3.50	3.00	3.00
Std. Deviation		.61840	.43227	.71872
Variance		.382	.187	.517
Skewness		-.694	-.119	-.289
Std. Error of Skewness		.113	.113	.113
Kurtosis		1.594	.582	.612
Std. Error of Kurtosis		.225	.225	.225
Range		4.00	3.00	4.00
Minimum		1.00	1.63	1.00
Maximum		5.00	4.63	5.00
Sum		1634.33	1468.63	1478.00

Source: Researcher's Survey November/December 2019

Kline (2011) states that skewness index has to be less than 3 ($Sk < 3$) and Kurtosis has to be less than 10 ($Kur < 10$) for data to be normally distributed. The skewness and the kurtosis of the distribution for each of the three variables falls within these ranges. Accordingly, with reference to Kline (2011), these skewness and kurtosis values indicate that the data recorded for social media marketing, purchase intention and perceived trust are approximately normally distributed. When looking at the mean value of the distribution of responses for the variables, Social Media Marketing has the highest mean of 3.4847 and Perceived Trust has the least mean of 3.1314. Concluding from the values of these means, it is possible to state that the consideration of social media marketing of the respondents is “high” and the perceived trust towards brands that respondents come across digitally is “moderate”. The standard error of mean is least for Perceived Trust and the highest for Purchase Intention. It is appropriate to report that since Perceived Trust has the lowest standard error of mean; it has a better accuracy in the reflection of the population compared to the other variables. It is evident from the table below that Purchase Intention has the highest standard deviation and hence its variance is higher than the other variables. Accordingly, it is possible to infer that the data distribution of

Purchase Intention is more spread out or has a more dispersed data set compared to the other variables. On the other hand, Perceived Trust has the lowest standard deviation and hence its variance is lower than the other variables. Accordingly, it is possible to infer that the data distribution of Perceived Trust is less spread out or has a less dispersed data set compared to the other variables.

Primary Assessments

Preliminary analysis has been conducted by the researcher to assess the reliability, validity, and normality in order to get an understanding of the instrument used for data collection and the nature of the data collected in advance.

Reliability

Table 3: Summary Representation of Cronbach's alpha

Measures	Cronbach's alpha value	Number of items
Social Media Marketing	0.735	6
Perceived Trust	0.758	8
Purchase Intention	0.863	4

Source: Researcher's Survey November/December 2019

As summarized within the table above, the Cronbach's alpha for each of the variables is more than 0.7 and range from 0.735 to 0.863. Accordingly, with reference to (Nunnally, 1978), it can be derived that, all the constructs used within the questionnaire are reliable (i.e. consists of internal consistency), as it exceeds the Cronbach's alpha value (Cronbach's alpha > 0.7) provided by Nunnally (1978).

Validity

Table 4: Summary Representation of Validity Values

Construct	KMO value	Significance	Bartlett's Test of Sphericity
Social Media Marketing	.790	.000	552.863
Perceived Trust	.785	.000	841.739
Purchase Intention	.826	.000	873.607

Source: Researcher's Survey November/December 2019

High values (between 0.5 and 1.0) indicate that factor analysis is appropriate and values below 0.5 imply that factor analysis may not be appropriate, (Malhotra & Birks, Marketing Research: An Applied Approach, 2007). Hutcheson & Sofroniou (1999) also point out that values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb. Accordingly, it's evident from the above table that KMO value for each of the variables range from 0.785 to 0.826 (represent good values to great values) and hence meet the criterion for KMO value. Moreover, the above table also reflects that the p value or the significance value for Bartlett's Test of Sphericity for each of the variable is below 0.05. Taking both these measures into consideration and since the values for all the variables meet the criteria stated above, it indicates that factor analysis is appropriate and that the sample is adequate.

Normality

Table 5: Representation of Normality Test Values

Variable Name	Skewness	Kurtosis
Social Media Marketing	-.694	1.594
Perceived Trust	-.119	.582
Purchase Intention	-.289	.612

Source: Researcher's Survey November/December 2019

As discussed in the descriptive statistics, Kline (2011) states that skewness index has to be less than 3 ($Sk < 3$) and Kurtosis has to be less than 10 ($Kur < 10$) for data to be normally distributed. Accordingly, with reference to Kline (2011), these skewness and kurtosis values indicate that the data recorded for social media marketing, perceived trust and purchase intention are approximately normally distributed.

Correlation Analysis

As pointed out by (Field, 2009), a correlation coefficient above 0.5 represents a large effect, between 0.3 to 0.5 represents a moderate effect, and between 0.1 to 0.3 represents a small effect. Accordingly, as reflected in the summary table below, while all the variables have positive correlation coefficients, which represents the existence of positive relationship among each of the variable pairs, a small effect or relationship can be observed between Social Media Marketing and Perceived Trust as well as between Social Media Marketing and Purchase Intention with Perceived Trust as a control variable. Social Media Marketing and Purchase Intention as well as Perceived Trust and Purchase Intention represent moderate effect or relationship as their correlation coefficients fall between 0.3 to 0.5. As highlighted in the table above, the significant level (p-value) is 0.000 for each of the variable pairs, which is less than 0.01. This significance value tells us that the probability of getting a correlation coefficient this big in a sample of 469 people if the null hypothesis were true (i.e. there was no relationship between these variables) is very low (close to zero), and thereby gain confidence that there is a genuine relationship between each of the pairs of variables (Field, 2009). Accordingly, it is accurate to state that there's a significant relationship between each of the variable pairs.

Table 6: Summary of Correlation Statistics

Relationship among variables	Pearson's Correlation Coefficient	Sig. Value	Decision	Strength of the relationship
Social Media Marketing and Purchase Intention	0.366	.000	Accepted	Moderate
Social Media Marketing and Perceived Trust	0.297	.000	Accepted	Small
Perceived Trust and Purchase Intention	0.487	.000	Accepted	Moderate
Social Media Marketing and Purchase Intention with Perceived Trust as a control variable	0.266	.000	Accepted	Small

Source: Researcher's Survey November/December 2019

Hypothesis Testing

Within the course of hypothesis testing simple linear regression has been adapted to assess the direct relationship between the independent and dependent variables whereas mediator analysis was used for the purpose of understanding the impact of perceived trust within the relationship of social media marketing and purchase intention.

Regression Analysis for Social Media Marketing and Purchase Intention

Table 7: Model Summary of Social Media Marketing and Purchase Intention

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.366 ^a	.134	.132	.66952

a. Predictors: (Constant), Avg_SMM

Source: Researcher's Survey November/December 2019

As reflected in the table above, adjusted R square value is 0.132. This value can be interpreted as, how much of the change or total variation in the dependent variable can be explained by the independent variable. Accordingly, if we convert this value into a percentage, 13.2% of the total variation in purchase intention can be explained by social media marketing. To put this value into perspective, the remaining 86.8%, that's not explained by social media marketing, is explained by other factors which are not included in this model.

Table 8: ANOVA of Social Media Marketing and Purchase Intention

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.416	1	32.416	72.316	.000 ^b
	Residual	209.336	467	.448		
	Total	241.752	468			

a. Dependent Variable: Avg_PI

b. Predictors: (Constant), Avg_SMM

Source: Researcher's Survey November/December 2019

As depicted in the table above, it is evident that the significant level is 0.000 at a F statistic of 72.316. Accordingly, it can be stated that there's a statistically significant relationship between social media marketing and purchase intention. This indicates that this model with Social Media Marketing as the predictor or independent variable and Purchase Intention as the dependent variable, as a whole is significant.

Table 9: Coefficients of Social Media Marketing and Purchase Intention
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.668	.177		9.420	.000
	Avg_SMM	.426	.050	.366	8.504	.000

a. Dependent Variable: Avg_PI

Source: Researcher's Survey November/December 2019

With reference to the above table, it's possible to derive the values to develop the model equation reflecting the relationship between the two variables under consideration. Accordingly, 1.668 is the constant (β_0), 0.366 is the slope (β_1), where this Beta value is significant at 0.05 significant level (as depicted in the table the significance value is 0.000 which is less than 0.05). Based on these figures derived from the above table the model equation for purchase intention and social media marketing can be generated as,

$$\text{Purchase Intention} = 1.668 + 0.366(\text{Social Media Marketing}) + e$$

The slope (β_1) indicates that if Social Media Marketing is increased by 1 unit, Purchase Intention will be increased by 0.366 units. As proven from the positive slope (positive coefficient) of the equation above, it can be stated that this relationship is a positive one. As proven from the positive slope (positive coefficient) of the equation above and significance level, it can be stated that this relationship is a significant positive one and hence the H1 hypothesis of the study can be accepted.

Regression Analysis for Social Media Marketing and Perceived Trust

Table 10: Model Summary of Social Media Marketing and Perceived Trust

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.297 ^a	.088	.086	.41319

a. Predictors: (Constant), Avg_SMM

Source: Researcher's Survey November/December 2019

As reflected in the table above, adjusted R square value is 0.086. This value can be interpreted as, how much of the change or total variation in the dependent variable can be explained by the independent variable. Accordingly, if we convert this value into a percentage, it is possible to state that social media marketing shares 8.6% of the variability in perceived trust. In other words, 8.6% of the total variation in perceived trust can be explained by social media marketing. To put this value into perspective, this leaves 91.4% of the variability of perceived trust still to be accounted for by other variables. In simple terms, the remaining 91.4%, that's not explained by social media marketing, is explained by other factors which are not included in this model.

Table 11: ANOVA of Social Media Marketing and Perceived Trust

ANOVA^a

Model		Sum Squares	of Df	Mean Square	F	Sig.
1	Regression	7.720	1	7.720	45.218	.000 ^b
	Residual	79.730	467	.171		
	Total	87.450	468			

a. Dependent Variable: Avg_Per_Tru

b. Predictors: (Constant), Avg_SMM

Source: Researcher's Survey November/December 2019

As depicted in the table above, it is evident that the significant level is 0.000 at a F statistic of 45.218. Accordingly, it can be stated that there's a statistically significant relationship between social media marketing and perceived trust. This indicates that this model with Social Media Marketing as the predictor or independent variable and Perceived Trust as the dependent variable, as a whole is significant.

Table 12: Coefficients of Social Media Marketing and Perceived Trust

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.408	.109		22.027	.000
	Avg_SMM	.208	.031	.297	6.724	.000

a. Dependent Variable: Avg_Per_Tru

Source: Researcher's Survey November/December 2019

With reference to the above table, it's possible to derive the values to develop the model equation reflecting the relationship between the two variables under consideration. Accordingly, 2.408 is the constant (β_0), 0.297 is the slope (β_1), where this Beta value is significant at 0.05 significant level (as depicted in the table the significance value is 0.000 which is less than 0.05). Based on these figures derived from the above table the model equation for perceived trust and social media marketing can be generated as, *Perceived Trust* = $2.408 + 0.297(\text{Social Media Marketing}) + e$.

The slope (β_1) indicates that if Social Media Marketing is increased by 1-unit, Perceived Trust will be increased by 0.297 units. As proven from the positive slope (positive coefficient) of the equation above and significance level, it can be stated that this relationship is a significant positive one and hence the H2(a) hypothesis of the study can be accepted.

Regression Analysis for Perceived Trust and Purchase Intention**Table 13: Model Summary of Perceived Trust and Purchase Intention****Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.487 ^a	.237	.236	.62827

a. Predictors: (Constant), Avg_Per_Tru

Source: Researcher's Survey November/December 2019

As reflected in the table above, R square value is 0.236. This value can be interpreted as, how much of the change or total variation in the dependent variable can be explained by the independent variable. Accordingly, if we convert this value into a percentage, it is possible to state that perceived trust shares 23.6% of the variability in purchase intention. In other words, 23.6% of the total variation in purchase intention can be explained by perceived trust. To put this value into perspective, this leaves 76.4% of the variability of purchase intention still to be accounted for by other variables. In simple terms, the remaining 76.4%, that's not explained by perceived trust, is explained by other factors which are not included in this model.

Table 14: ANOVA of Perceived Trust and Purchase Intention**ANOVA^a**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.415	1	57.415	145.455	.000 ^b
	Residual	184.337	467	.395		
	Total	241.752	468			

a. Dependent Variable: Avg_PI

b. Predictors: (Constant), Avg_Per_Tru

Source: Researcher's Survey November/December 2019

As depicted in the table above, it is evident that the significant level is 0.000 at a F statistic of 145.455. Accordingly, it can be stated that there's a statistically significant relationship between perceived trust and purchase intention. This indicates that this model with Perceived Trust as the predictor or independent variable and Purchase Intention as the dependent variable, as a whole is significant.

Table 15: Coefficients of Perceived Trust and Purchase Intention**Coefficients^a**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.614	.212		2.892	.004
	Avg_Per_Tru	.810	.067	.487	12.060	.000

a. Dependent Variable: Avg_PI

Source: Researcher's Survey November/December 2019

With reference to the above table, it's possible to derive the values to develop the model equation reflecting the relationship between the two variables under consideration. Accordingly, 0.614 is the constant (β_0), 0.487 is the slope (β_1), where this Beta value is significant at 0.05 significant level (as depicted in the table, the significance value is 0.000 which is less than 0.05). Based on these figures derived from the above table the model equation for purchase intention and perceived trust can be generated as, $Purchase\ Intention = 0.614 + 0.487(Perceived\ Trust) + e$

The slope (β_1) indicates that if Perceived Trust is increased by 1-unit, Purchase Intention will be increased by 0.487 units. As proven from the positive slope (positive coefficient) of the equation above and significance level, it can be stated that this relationship is a significant positive one and hence the H2(b) hypothesis of the study can be accepted.

Mediator Analysis

A mediation analysis is conducted to indirectly assess the effect of a proposed cause on some outcome through a proposed mediator and the utility of mediation analysis stems from its ability to go beyond the merely descriptive to a more functional understanding of the relationships among variables (Preacher & Hayes, 2004). The researcher has adapted the Process Model V3.0 by Andrew F. Hayes to carry out the mediator analysis. The analysis has been carried out through IBM SPSS Statistics 23.0. The researcher has adapted the "Single Mediator Model", to study the mediating impact of perceived trust on the relationship between Social Media Marketing and Purchase Intention (H2).

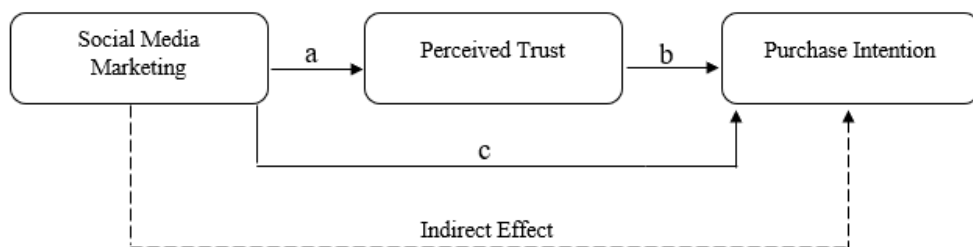


Figure 2: Single Mediator Model for the relationship between Social Media Marketing and Purchase Intention mediated by Perceived Trust

Source: Researcher's Survey November/December 2019

Through the analysis of the mediator analysis output tables, the researcher intends to derive each of the four values representing the relationship between the variables in the above figure (the mediating impact is reflected through the dotted line labelled as the indirect effect).

Table 16: Model Summary of Mediator Analysis for relationship between Social Media Marketing and Purchase Intention mediated by Perceived Trust (with perceived trust as the outcome variable)

Outcome Variable: Perceived Trust						
Model Summary						
R	R-sq	MSE	F	df1	df2	P
.2971	.0883	.1707	45.2181	1.0000	467.0000	.0000
Model						

	coeff	se	t	P	LLCI	ULCI
Constant	2.4077	.1093	22.0268	.0000	2.1929	2.6225
Social Media Marketing	.2077	.0309	6.7244	.0000	.1470	.2684

Source: Researcher's Survey November/December 2019

The vitality of the above table lies in the figures highlighted, depicting the coefficient reflecting the relationship between Social Media Marketing and Perceived Trust (path “a”) is 0.2077. With reference to both the lower bound and the upper bound of the confidence interval, it can be stated that this relationship is significant, as both the limits of the confidence interval have the same sign (positive figures for both the lower and upper bound of the confidence interval).

Table 17: Model Summary of Mediator Analysis for relationship between Social Media Marketing and Purchase Intention mediated by Perceived Trust (with purchase intention as the outcome variable)

Outcome Variable: Purchase Intention						
Model Summary						
R	R-sq	MSE	F	df1	df2	P
.5397	.2913	.3677	95.7486	2.0000	466.0000	.0000
Model						
	coeff	se	t	P	LLCI	ULCI
Constant	.0063	.2291	.0275	.9781	-.4438	.4564
Social Media Marketing	.2822	.0475	5.9451	.0000	.1889	.3755
Perceived Trust	.6903	.0679	10.1654	.0000	.5569	.8238

Source: Researcher's Survey November/December 2019

The above table depicts the coefficients defining the relationship between Social Media Marketing and Purchase Intention (path “c”) which is 0.2822 and the relationship between Perceived Trust and Purchase Intention (path “b”) which is 0.6903. With reference to both the lower bound and the upper bound of the confidence interval of both the relationships, it can be stated that these relationships are significant, as both the limits of the confidence interval have the same sign (positive figures for both the lower and upper bound of the confidence interval).

Table 18: Completely standardized indirect effect(s) of Social Media Marketing on Purchase Intention

Completely standardized indirect effect(s) of X on Y:				
	Effect	BootSE	BootLLCI	BootULCI
Perceived Trust	.1234	.0225	.0792	.1673

Source: Researcher's Survey November/December 2019

The above table depicts that the indirect effect of 0.1234 is significant as both the limits of the confidence interval have the same sign (both the lower and upper bound of the confidence interval have positive figures). Since the coefficient is a positive value, it could also be pointed out that the relationship is positive. Accordingly, it is possible to conclude that the mediation effect of perceived trust between the relationship of social media marketing and purchase intention is significant. Therefore, it can be pointed out that, the relationship reflected within the model supports the H2(b) hypothesis of the researcher, which states that the impact of Social Media marketing on the purchase intention of consumers towards natural ingredient-based personal care products is affected by Perceived Trust.

Therefore, it can be pointed out that, the relationship reflected within the model supports the H2 hypothesis of the researcher, which states that the impact of social media marketing on the purchase intention of consumers towards natural ingredient-based personal care products is affected by Perceived Trust.

Table 19: Summary of Hypothesis Testing (Regression Analysis)

Hypotheses	Regression	Standardized Beta	P - Value	Result
H1: There is a significant positive impact of Social Media Marketing on the purchase intention of consumers towards natural ingredient-based personal care products.	Simple Linear Regression	0.366	0.000	Accepted
H2(a): There's a significant positive impact of Social Media Marketing on the connected consumer's perceived trust	Simple Linear Regression	0.297	0.000	Accepted
H2(b): There's a significant positive impact of Perceived Trust on the customer's purchase intention towards natural ingredient-based personal care products	Simple Linear Regression	0.487	0.000	Accepted

Source: Researcher's Survey November/December 2019

Table 20: Summary of Hypothesis Testing (Mediation Analysis)

Hypothesis	Indirect Effect	Lower Bound (LLCI)	Upper Bound (ULCI)	Result
H2: The impact of Social Media Marketing on the purchase intention of consumers towards natural ingredient-based personal care products is affected by Perceived Trust.	0.1234	0.0792	0.1673	Accepted

Source: Researcher's Survey November/December 2019

Based on the above analysis it can be concluded that the hypotheses H1, H2, H2(a), H2(b) hypotheses can be accepted.

Accordingly, it can be stated that, so far through the analysis, the main objective (corresponding to research question 1 and Hypothesis 1), and the first three sub objectives (corresponding to the research questions 2,3, and 4) have been achieved and accepted as true.

Addressing Sub Objective '4'

Table 21: Figures Summary for Sub Objective 4

Relationship Path	Standardized Beta Co-efficient (β)	Adjusted R ²
SMM – PT	0.297	0.086
SMM – PI	0.366	0.132

SMM – Social Media Marketing, PT – Perceived Trust, PI – Purchase Intention

Source: Researcher's Survey November/December 2019

As per the figures depicted in the table above, 13.2% of the total variation in purchase intention can be explained by social media marketing while only 8.6% of the total variation in perceived trust can be explained by social media marketing. The slope (β) for SMM – PI indicates that if Social Media Marketing is increased by 1 unit, Purchase Intention will be increased by 0.366 units while the slope (β) for SMM - PT indicates that if Social Media Marketing is increased by 1-unit, Perceived Trust will only be increased by 0.297 units. Accordingly, as evident from the above figures, it can be stated that Social Media Marketing has a higher impact on Purchase Intention than it does on Perceived Trust.

To confirm this finding the researcher has also followed the approach stated by Peterson & Brown (2005), suggest a procedure for converting standardized β weights to r , if the β weights range between -0.5 and 0.5. r can then be used directly as an effect size or converted into d or other metrics. Accordingly, the following figures (r) have been obtained from the calculator provided by:

https://www.psychometrica.de/effect_size.html

SMM – PT Effect Size

Standardized β weight	r
0.297	0.347

SMM – PI Effect Size

Standardized β weight	r
0.366	0.416

As reflected in the above effect size calculations as well, it can be concluded that Social Media Marketing has a greater impact on Purchase Intention than it does on the Perceived Trust Connected Consumers.

Discussion and Findings

The study under consideration was completed with the view of understanding the impact of social media on the purchase intention of connected consumers. Thereby, the researcher conducted an analysis in order to understand the impact of social media marketing on the purchase intention and whether social media marketing contributes to the creation of perceived trust that ultimately leads to a purchase intent. The analysis also looked at the direct impact of social media marketing on perceived trust as well as of perceived trust on purchase intention. Furthermore, the researcher also assessed and compared the extent to which social media marketing impacts on each of the perceived trust and purchase intention. This section of the write-up attempts to provide a practical sense and put into perspective the various findings elaborately explained in the data analysis section above.

Deriving from the analysis it can be stated that Social Media Marketing is found to have a significant positive impact on the Purchase Intention, while mediating effects of Perceived Trust served the relationship between Social Media Marketing and Purchase Intention. It was also found that Social Media Marketing has a significant positive impact on perceived trust and that perceived trust has a significant positive impact on purchase intention. The study also did an effect size comparison to infer into the size of the impact of social media marketing on each of the purchase intention and perceived trust. The study unveiled that Social Media Marketing has a higher impact on purchase intention than it does on perceived trust which has practical and theoretical implications. This finding practically makes sense as many of the social media sites such as Facebook, Instagram mostly used in Sri Lanka (Facebook has around 6 Mn people that can be reached with adverts on Facebook and Instagram has around 990k people that can be reached with adverts on Instagram (Hootsuite, 2020)), are less known to provide 100% trustworthy content and information but more known driving consumers towards purchases. This is why Facebook and Instagram pages allow customers to directly place orders or make purchases after seeing an advert or surfing those pages. In summation, all the hypothesized relationships have been accepted during the course of this study and all the objectives set for the study has been achieved.

The study provides insightful findings as to how digital marketers of natural personal care products can use the social media marketing and create more targeted digital communications addressing the purchase intention of the connected consumers to move the impacting audiences in order to create effective, trustworthy messages and communications. The study is an original contribution to the context of Natural Ingredient-based Personal Care Products.

Studying the intensity of the impact of social media marketing on each of purchase intention and perceived trust has generated findings that are of practical use within the industry.

Future researches can combine two or more digital marketing tactics within the same study to compare and understand which tactics create a higher impact on each of the perceived trust and purchase intention and any other digital marketing objectives. The researcher also proposes that the study should be conducted in different samples and contexts facilitating the direct comparability of the findings of this study and thereby contributing much robust insights to the knowledge base within the context of this research. Future researches can expand the scope of the research into other regions of Sri Lanka or even to other countries so that there would be a better generalizability of the findings covering different types of consumers and more cultural backgrounds. Moreover, the current study only used the social media marketing suggested as one of the most effective by commercial and academic literature. Future researches may encompass a higher number of digital marketing tactics, improving the comparability of the tactics and the ability to identify the most significant digital marketing tactic among several others, while also diving deep into further analysis depending on the most significant variable identified. While the current study attempted to understand how the age acts as a moderator within the relationships hypothesized within the study, the two age groups were identified based whether the digital literacy is above 50% or not. Future research can focus on studying age groups pertaining to different generations such as generation x, millennials, generation z etc.

These findings will serve as an initial step or a means for the digital marketers of natural ingredient-based personal care products, to move away from being stranded in the entanglement of the lack of consumer trust on their social media marketing efforts and actually make effective use of time and resources to utilize social media channels based on which objective(s) can be productively catered through the respective channel or platforms.

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Application of Artificial Intelligence in Marketing Mix: A Conceptual Review

Nanayakkara, N. W. O. K. D. S. P.¹

Integration of technology into the business context is one of the centuries old marvel, where the difference is defined in terms of innovations and processes improvements. In recent years, Artificial Intelligence (AI) has turned out to be an emerging trend in diverse fields: business, education, science, medicine and automotive. AI has also been integrated into marketing and such integrations have become a fast-growing trend which guarantees the competitive advantage in the business context. In order to execute AI in marketing strategy, companies have redefined their marketing mix with AI. Empirical studies are found explaining how AI leverage the marketing mix with the presence of extensive data by encouraging business intelligence decision making related to future business processes, consumer behavior, and market trends which leads to promote decision making, which creates businesses a competitive edge over its rivals. Alongside, this paper attempts to appreciate the application of AI, embedded technologies and automation in aiding the 4Ps of marketing. The literature review was carried out addressing the key sub insights associated with marketing and AI. Journal articles have been reviewed as the main source of information to structure the contents with empirical justifications. Lastly, the paper deliberates how embracement of AI, results in designing marketing mix and the author attempts to explain the future potential implications of AI with regard to the 4Ps.

Keywords: *AI, Artificial Intelligence, Big Data, Marketing, Marketing Mix*

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¹ Department of Marketing Management, University of Kelaniya, Sri Lanka. (2017_sonali@kln.ac.lk)

Introduction

Global trends are shaped by the technological disruption where Artificial Intelligence (AI) plays a big role through the application of computer and information technology to develop machines that can imitate the intellectual capabilities of human beings (Pavaloiu, 2016). The technological development has boosted the industry through disruptive systems where AI has the objective to simulate and duplicate intelligence of humans and will be redefined by people apart from the existing capabilities of machines (Kaplan, 2016). Integration of technology and AI into business operations, processes and organizations is another growing demand in the modern era (Molsa, 2016).

Alongside, in the present business context technology applications continue to increase efficiency in decision making and overall business operations where business management and operations are in an era of data, which shapes day-to-day processes in business operations (Brynjolfsson & McAfee, 2017). The main objective of AI is to leverage the presence of extensive data to encourage business intelligence decision making using sophisticated algorithms that are used in generating insights into future business processes, consumer behavior, and market trends which leads to promote decision making, that creates businesses a competitive edge over its rivals (Zahrani & Adel, 2018).

Although AI is still a new topic in the world, the application of AI has impressively boosted business activities particularly in the area of marketing (Heine, 2017). According to Israeli and Avery (2017), the advancement in AI and the rapid embracement of AI into businesses has showcased the effectiveness among marketers which has created an intimate sweeping change to the nature of marketing itself. AI has changed the communication ontology and practice has proved that the scene set up by AI can gain insights into the hearts of consumers through big data analysis, machine learning and other technologies, so that brands can better understand customers (Chang, Fang, & Chen, 2019). According to Campbell, Sands, Ferraro, Tsao, and Mavrommatis (2019), AI provides a large range of opportunities in the marketing platforms, in market targeting, product recommendations, and optimize advertising campaigns. AI allows personalized campaigns, collaborative filtering, and predictive models as well. Advancement in the field of big data proves the availability and accessibility of information, with the primary goal of turning data into useful insight or actionable strategy. In the process of drawing conclusions from unstructured data on cause and effect in an extremely large data set, AI can provide a big contribution to marketers. Since AI has the ability to capture and identify patterns, it will help marketers to identify trends and opportunities and react to them accordingly by being proactive (Wood, 2011). For instance, marketers use AI to extract sentiments from customers in social channels offering insight at different stages of a marketing plan (Campbell et al., 2019). As per Gentsch (2019), marketers can implement personalized, custom made products and price combinations for every customer with the help of AI. Furthermore, by using modern algorithmic, personalized advertisements in online marketing can also be created which provides a massive competitive edge to marketers.

The increasingly sophisticated developments and advancements in AI, creating excitement in the field of marketing and the high adoption rate of AI in the industry makes the topic of AI in marketing, ever more interesting to carry out further studies (Chow, 2017). In addition to that, AI provides constructive benefits to marketers, consumers, and the society as a whole by improving, creating, optimizing and distributing value which demands the need of more literature to identify the importance of AI in marketing (Gentsch, 2019). In this study, the author has decided discuss the purpose of the study and methodology, literature review and the discussion with conclusion and future directions.

Purpose of the Study

Together with the brief including the empirical highlights on knowledge requirements in the field of AI, this paper attempts to review the importance of AI with regard to marketing mix. Though the significance of AI has been referred in relation to many business and organizational contexts, enough empirical studies are yet to be identified and is limited even within the marketing context (Chui, Kamalnath, & McCarthy, 2018). While many researchers tend to focus on the particular area of AI in business, it is only a few academics whose interest has flickered in relation to AI from a marketing perspective (Israeli & Avery, 2017). Apart from that, most of the marketing managers have confidence in AI as a revolutionizing potential while, many are still unaware of the extent of the benefits or not sure how they can adopt AI to improve marketing (Reavie, 2018). Thus, this paper seeks to address a contribution to the literature on AI and, in particular, the phenomenon of the importance of AI in marketing mix. Furthermore, AI contributes, both theoretically and practically to marketing decision making, and this importance has only been realized to a very limited context, hence the author attempts to make a contribution by taking a closer look at the opportunities for AI in marketing, considering the achievements so far, and by addressing the potential perspectives for the future.

In addition to that, the researcher argues that AI needs to be empirically discussed related to different marketing theories and contexts, in order to unveil its real influence. Therefore, the author attempts to explore how AI has been found in empirical studies linked to different marketing contexts. Furthermore, this paper contributes to prevailing knowledge as a conceptual review to synthesize the role of AI in marketing mix in the current and future context, where it will be researched and claimed in future research directions.

Methodology

This paper follows a deductive approach in which arguments and explanations are primarily supported by empirical indications and related theoretical contents (Macinnis, 2004). It has attempted to review the empirical thoughts as an organized content on how AI links to marketing mix in different contexts and literature review has been recognized as the main research tool. Finally, it has concluded the main remarks though suggesting key insights for the future research directions.

Literature Review

This paper presents the literature review by mainly focusing on the empirical overview on AI and marketing whilst explicit consideration is made towards the convergence on AI and its impact on marketing activities. Additionally, content describes how AI has appeared as represented in the empirical studies.

Artificial Intelligence

Artificial Intelligence is the computerized systems that intake data, to perform a particular task of intelligent beings in a way that maximizes its chance of success. The most suitable term to define AI is “a portfolio of technologies” since there is a variety of different types of AI (Kaput, 2016). AI technologies provide different benefits and they are developed at different rates, but they are all focused on imitating human intelligence in computers to make operations smart. According to Hamet and Tremblay (2017), it is believed that AI has merely originated with the invention of robots and today, AI is considered a branch of engineering which resolves the complex challenges through novel concepts and novel solutions. Further explained by Hamet and Tremblay (2017), with continued progress in software programming,

capacity, and electronic speed computers might be as intelligent as humans one day and no one will be able to disregard the significant contribution done by contemporary cybernetics to the development of AI. Literature on AI is ample and uncontrolled in today's context and AI has been depicted as a likely risk to the world economy by 2015 and even AI might eliminate humanity one day (WEF, 2016). According to Luger & Stubblefield (2008), AI is the automation of intelligent behavior created with the aid of computer science.

However, the benefits of AI have spread its wings in macroscopic and microscopic level from industry environment, economics, and employment to the company level including the fields of finance and marketing and also in several diverse field such as medicine, automotive, robotics etc. Talking about the benefits of AI for businesses, AI provides a new fuel for any business model which helps to identify abundant business situations, forecasts new conditions and to take smart business decisions which would make a company more profitable (Coats, 1987). So as a result of easy access to modern technology, AI is taking over business intelligence applications in both small and large scale business organizations. AI has replaced the traditional production process through automated production processes and furthermore, financial activities of organizations are also carried out through AI applications as it provides highly accurate computations and reports automatically (Trippi & Turban, 1992). Thus, AI can allow big data to flow and break them down in to possible actionable insights, companies can make better informed decisions accordingly. It has been suggested by Michalski, Carbonell, & Mitchell (2013), that the adoption of AI by organizations is increasing highly as there's a shortage of professionals with data analytical skills. With the corporation of AI with marketing, business organizations have the ability of creating buyer personas that allows business organizations to predict consumer behavior and to effectively market their products to the target market which is the main discussion of this paper (Pavaloiu, 2016).

AI in Economy

AI has a huge effect on the economy with the potentials to increase growth of productivity and by persuaded labor disruptions would exacerbate prevailing problems in the labor force (Mitchell & Brynjolfsson, 2017). The economy develops in cycles, and with the introduction of new technology and AI, new business models have emerged and the economy has developed in online fields and e-commerce. Accordingly, financial services have been streamlined with online banking, e- payments by optimizing the operations. Substantially, drastic changes have occurred in each cycle (Nancey & Benjamin , 2017). According to Howard (2014), automation will make a society technologically rich but in the meantime it will create high unemployment rates or low labour in the economy. Another potential issue is that, income discrimination may also arise. Although automation will not take place in each and every company in the same way, but the job shoratage may occur unevenly which causes entrepreneurship, innovation, talent harness, and an abundant economy. Therefore, a new set of values and a shared context needs to be created for machines to be able to become an accompaniment to people effectively (Pavaloiu, 2016).

Alongside that, employment shifts may also take place in the economy as a result of the automation of activities done by laborers (Kaplan, 2016). He further explained that, social status, earned income, job recognition will not be the influences to define whether automation can substitute the skills needed for achieving a job or not. The white collar jobs such as accountant, budget analysts, audit officers will be the most prone jobs to come under automation while CEOs, therapists and surgeons will be hard to replace. When considering the blue collar jobs such as cashiers, drivers and gaming dealers have the highest risk of automation and designers, editors, lawyers have the lowest risk (Pavaloiu, 2016). There will be no automation in the pink color jobs which represents the services industry (Kaplan, 2016).

AI in Management

The high embracement of AI and robotics have created both opportunities and threats including the disappearance of certain professions, while re designing the management functions is one of the opportunities as well as a challenge in adapting organizations to new conditions in the interest of workers, employees and in whole to the society (Chernov & Chernova , 2019). As per the findings of Brynjolfsson and McAfee (2012), AI will bring up strong challenges to the management system in any organization which could be considered as a fourth revolution accelerator and the correct and timely adaptability to these challenges will be the key successful factor in modern organizations. Furthermore, non-standard activities like increasing the efficiency of e-Commerce, managing production lines in heavy industries can be performed through intelligent machines as a result of the development in deep machine learning technology. Subsequently, this trend created reasonable concerns such as replacement of employees by intelligent machines in various organizations, creating complexities to managers' task by making them to review their ultimate principles of work and organizations needed to adapt their training programs and strategies to attract talent, concentrating on those jobs that require evaluative judgment skills, such as creativity, collaboration and the ability to experiment (Chernov & Chernova, 2019).

Once AI technology is deployed in an organization, the values, practices, the way subordinates work, the fulfilment of tasks, goal accomplishments and on a whole the strategic management will reshape accordingly (Holtel, 2015). It has been suggested by Ross (2013), with the embracement of AI in management a company will be affected, namely in two ways: (1) Distribution of power will be reassessed in the organizational structure as a result of replacing human work force by AI, and the organizational structure will be flattened. Henceforth, the decision making process of organizations change and new ways of collaboration will appear and (2) The reasoning literacy of all related stakeholders will need to be improved, since AI will essentially change the way people narrate to knowledge and to the way they perceive a possible threat for their job where managers need to have a plan if they face conflicting results and the machines do not comply with their decisions (Wile, 2014).

AI in Marketing

Decisions related to 4Ps, brands, advertising are taken upon the deep knowledge of the customers by the marketing managers where the outcomes of these decisions have a direct impact on the behavior of other parties such as competitors, suppliers and resellers (Tiautrakul & Jindakul, 2019). Thus, marketing decision making is a very complex process with a combination of analysis and judgment, large degree of knowledge, expertise, and experience of professionals play an important role (Chovancova, Asamoah, & Wanninayake, 2012). Therefore, the role of AI plays an important contribution to marketing decision making (Wierenga, 2010). Technology as the most powerful tool is enabling marketers with a huge amount of information regarding consumers buying behavior, buying cycle, consumption patterns, key target attributes, delivery modes, technology and product preferences, favorable digital platforms, payment modes, etc. These huge bundle of insights from consumer can be transformed to meaningful information by AI powered tools for decision making. Advancements and the availability of big data provide marketers the ability to collect and aggregate huge amounts of information, with the ultimate objective of turning data into an actionable strategy and also AI allows marketers to be proactive by identifying the opportunities in the market (Campbell et al., 2019). Although Application of AI in marketing is a broader concept in nature, the author carries out the discussion by considering the marketing plan starting from analyzing the current market, understanding markets and customers, segmenting, targeting, and positioning, planning direction, objectives, and

marketing support, and developing a marketing strategy for planning and the implementation of controls (Wood, 2011).

Analyzing and understanding macro environmental factors will affect the business, its marketing, and its stakeholders. In this initial step, marketing managers try to interpret the current and future environment where the organization operates (Chaffey & Smith, 2013). In order to analyze Macro environment, marketers can utilize AI techniques such as social listening, which allows information on markets and consumers, particularly related to satisfaction, purchasing patterns, and product demand. In this context identification of changes in competitor behavior, product demand estimation and assessment of customer satisfaction can be catered through AI (Paschen, Pitt, & J, 2020). Social media and online forums provide consumers the access to most suitable products to their specific needs and those consumer discussions in the online environment will be monitored by AI market and consumer research agencies. This information provides insights to marketers in identifying how well consumer segments are being served by one's own brand as well as competitors' (Campbell, Sands, Ferraro, Tsao, & Mavrommatis, 2019).

Micro-environmental analysis provides information about market share trends, product demand, customer characteristics, and also information including needs, wants, behaviors, attitudes, brand loyalties, and purchasing patterns (Wood, 2011). According to Dunwoodie (2018), organizations can use web analytics as well as market research to gather information in this stage and marketers can use customer experience softwares such as Medallia with integrated AI capabilities which provides the voice of customer programs rather than traditional methods. This software allows organizations to dig information on customer preferences and data from web, social media, mobile activities and interactions with contact centers. Further explained by Campbell et al. (2019), real time feedbacks can be given through the analysed data, allowing immediate decisions and actions to be taken.

STP is a common strategic model in the marketing approach which reflects the increasing popularity of customer centric marketing strategies over product differentiation strategies (Brenner, 2019). In STP, marketers try their best to create brands that best appeals to different customer segments in the market through a targeting message by grouping customers based on different criteria (Wanninayake, 2014). AI will help marketers in both segmenting customers and predicting customer expectations and also AI provides tailored promotions and ads to each segment (Campbell et al., 2019). Image recognition and computer vision allow organizations to gain in depth understanding of their customer behaviours and segments accordingly. The pictures customers share, provide valuable insights and those insights can be used for segmentations which needs to be targeted with personalized advertisements (Dua, 2017). As highlighted by Peterson (2017), entire new ways of segmentation and targeting can be offered to customers through image recognition and computer vision where Pinterest is such a good example. Offering ways to scrub social media platforms to get insights in to user's images is one of the incredible activities done by AI companies and marketers will be able to see an increase of image based segmentation soon (Cannella, 2018).

On the other hand, AI and machine learning allow companies to extract different geographic, demographic and psychographic attributes of customers indirectly from behavioural data and provides some competitive advantage to the organization (Teichmann, 2019). Further explained by Teichmann (2019), the advantages of automated data driven approach are; scaling the entire customer base easily without missing or entering incomplete data, enabling first party data, containing information about the relevance of customer attributes and providing machine understandable encoded characteristics where data cannot be manipulated or changed. Despite the advantages of using AI for STP, marketers also need to be aware of

the dangers of discrimination through AI. While organizations essentially discriminate in terms of to whom they offer products and services, AI can lead to unpremeditated and illegal price discrimination through its emphasis on targeting different audiences (Newell & Marabelli, 2015).

Discussion

Applications of AI in marketing, is promptly developing world wide by representing the 4th largest use case of AI considering resources spent, and the 6th largest industry adopter of AI technology, with around 2.55% of the total industry having invested in marketing (Naimat, 2016). However, companies already use a variety of AI solutions to meet various marketing objectives successfully from low involvement to high involvement (Wierenga, 2010). This paper tries to extend the explanation on how marketing functions are done through AI whereas, previous literature is used as supportive contents for clarifications.

AI in the Marketing mix

Executing AI in marketing strategy, has become the new normal, since AI provides valuable consumer insights in real time for marketers to make use of. In order to execute AI, marketing strategy companies have redefined their marketing mix with AI (Talyor, 2019). The seller centric elements of marketing mix (4P's) transformed more to customer centric model wherein consumer replacing product, cost replacing price, convenience replacing place and communication replacing promotion (Londhe, 2014). Moreover, as per Singh (2017), application of AI and machine learning in marketing mix has entailed to forecast and to track the effectiveness and impact of each individual marketing channel.

AI and Product Mix

According to Campbell et al. (2019), opportunities to integrate with AI in product strategy comprises of identifying gaps for new product developments and product improvements, developing customized products to consumers' specifications, and coordinating the product delivery and logistics process. AI also has the potential to identify which products to produce by understanding the products which will be committed to be bought in future. Thus, it leads to reduce the cost of surplus stock and leverages the mass customization. Lily AI is one such platform that assists in product configuration in online settings. Lily AI allows consumers to complete the look at checkout by facilitating fashion retailers. Through the thorough understanding of customers' choices by Lily AI, it suggests head to toe outfits to shopper which leads to the increase in the size of the shopping basket at checkout (Brandon, 2017).

AI can also be used at designing the store environment as a part of the product strategy. It will lead to the reduction of labour hours, AI can be used to understand customers preferences and arrange the store layouts as well. Apart from that, product marketing can also be done through AI powered audience insights platforms identifying the customer insights from social media (Mcdowell, 2019).

Moreover, AI can improve customer loyalty and cross selling through automated product recommender systems which increases the satisfaction of potential customers (Marchand & Marx, 2020). As per Dunwoodie (2018), AI facilitates product strategy by collaborative designing where customers insights are taken highly in to consideration for product designing. AI smoothes the production strategy by allowing customers to design their own product and service and designs can be easily tested and revised more quickly through collaborative tools used in AI. (Brenner, 2019)

AI and Price Mix

AI can contribute in many ways to pricing such as estimating price elasticity, detecting pricing patterns and enabling dynamic pricing (Campbell et al., 2019). According to Jesus (2019), AI has the ability to track buying trends of consumers enabling competitive pricing solutions to marketers. AI pulls out all the competitive pricing data from different regions and provides the company a dynamic pricing solution. Also AI has the ability to grab pricing information on discounted prices offered by competitors and the willingness of customers to pay for discounted price. Industries like hotels, using dynamic pricing use AI to gain competitive advantage. For example hotels which are underoccupied may use AI and adjust pricing by balancing the supply and demand to increase profits (Hear, 2017). And also, AI has the ability of creating competitive pricing index considering competitors prices allowing a benchmarked price for brands that want to ensure their pricing is competitive (Jarek & Mazurek, 2019). AI benefits the pricing strategy by tailoring pricing according to the customized products by resetting pricing decisions based on the finding of different yield management approaches (Jesus, 2019).

Pricing analytics softwares use different techniques generated with different statistical models to generate algorithms that automatically recognize patterns from the data and forecast prices based on information (Node, 2020). Patterns from enormous data sets such as data from purchase history, inventory levels and competitors' pricing, product preferences and demand, and any data related to pricing are captured (Node, 2020). Deyo (2018), argued that automated AI pricing solutions are the future of pricing decisions where even companies go on margins since all the businesses hardly want to reduce the enormous amounts of time spent on manual labour on tracking the competitor's prices. In summary marketing managers will get real time market intelligence with all the information covered with a large scale integration and automation of data (Brenner, 2019).

AI and Place Mix

AI will have a positive influence on distribution mainly in three key areas ; at the point of sale, throughout the supply chain and within the internal processes (Cohen, 2019). Particularly, marketer has to take a decision on what the distribution channel is, since there are direct channels, wholesale channels and retail channels. At this stage, AI will pave the way to new arenas of new marketing channels such as e-commerce and online channels which will drastically reduce many costs of the organization (Dorfer, 2018). AI will provide a faster and a convenient platform for their customers to purchase and 24/7 shopping will be available to customers via applications like chatbots (Jarek & Mazurek, 2019). Purchase order automation is another innovation through AI where manual entry from purchase orders can be detached from distribution processes. Purchase order automation softwares can capture purchase orders allowing POs to proceed faster with lower cost (Karani, 2020). As per Brandon (2017), AI has the power to automate merchandising through online context by increasing the revenue and adding value. As a result of convenient and online shopping, consumers can shop anything at anytime from anywhere which provides new opportunities for businesses to engage more with consumers outside their traditional locations. Similarly, developments may take place in B2B sales with the advancement of AI (Paschen et al., 2020). In addition, AI enables channel optimisations and facilitates in identifying missed channels very easily. Also, integration with AI for distribution, improves transaction times and speeds up the transaction process (Chaffey & Smith, 2013).

AI and Promotion Mix

Since we are at the age of considering 'customer as the king', a 360 degree experience across all marketing channels, providing unparalleled customer services, delighting customers and personalized recommendations will create loyal customers (Deyo, 2018). So that marketers are working proactively to give their customers the best possible experience and at this stage marketers work to generate and witness the brand meaning in the eyes of customers. To achieve this target, marketers involve in carefully developing, targeting and placing communications to convey an effective message to the selected target customers (Cannella, 2018). AI has created a wide variety of platforms for effective marketing communications such as A/B ad testing, contextual ad targeting, AI optimized ad retargeting, keyword bidding, and automation and personalization of content creation. As a result of AI intergration in marketing, personalized marketing communications have emerged through which marketers are able to enagage in one to one marketing. Insights from personalised communication accelerated the understanding between marketers, advertisers, and consumers (Strycharz, Noort, Helberger, & Smit, 2019). Meanwhile AI facilitates marketing communications through creating a unique experience, eliminating the learning process of product catagories and by creating a positive image on the consumer by minimizing consumer dissapoinments (Jarek & Mazurek, 2019).

AI facilitates promotional strategy in numerous ways. For advertising AI can be utilized in identifying and designing text, images and video contents to suit different market segments in different marketing channels (Kaput, 2016). Direct marketing is also being expanded and developed with the use of AI. AI enables direct marketing by selecting which forms and types of contacts, types of channel and types of content is suitable for different target groups (Brandon, 2017). Moreover, providing prsonalized responses from different consumers, anlysing and suggesting different personalized ideas are some of the approaches used by AI for personal selling.

Conclusion and Future Research Directions

The era of AI has approached the world offering a bundle of benefits to businesses, marketers, consumers, and to the society at large. As a result, traditional marketing practices have been integrated with AI enabling companies to reduce process times and engage with individual consumers at scale by simplifying marketers' ability to create and distribute a great value to the right people at the right time in the right way (Cannella, 2018). Moreover, AI has automated repetitive tasks allowing marketers to provide their fullest contibution to value generating activities which lead to generate a good consumer experience (Chernov & Chernova, 2019).

AI and automation have brought the most powerful tool, providing an information bundle regarding consumers buying behavior, buying cycle, consumption patterns, key target attributes, delivery modes, technology and product preferences, favorable digital platforms, payment modes, etc. These bundles of insights can be transformed into meaningful information by AI powered tools for effective decision making (Brenner, 2019). Campbell et al. (2019), argues that AI can be implemented in the whole marketing planning process by analysing AI tools in operational marketing functions. The author was able to identify a package of benefits to customers including a 24/7 customer service, automated recommendations and purchases, hyper personalized solutions, one to one marketing, and convenient shopping and many more new dimensions in the field of marketing. However, extended investigations are required to identify how organizations strategically use AI to support marketing mix strategy. The author has also highlighted innovative marketing and

businesses supported by AI solutions as a timely need for emerging economies to extend potential markets. With the inculcation of AI in marketing mix, the seller centric elements of marketing mix (4P's) have transformed more to a customer centric model wherein one can see the consumer replacing product, cost replacing price, convenience replacing place and communication replacing promotion (Londhe, 2014). Moreover, as per Singh (2017), application of AI and machine learning in marketing mix has entailed to forecast and to track the effectiveness and impact of each individual marketing channel.

The utilization of AI is growing promptly, dynamically changing and progressively developing in the business and marketing platforms (Gentsch, 2019) and there is only a limited number of studies carried out on application of AI in marketing mix. Therefore, to fill the literature gap more research studies, conceptual frameworks, articles need to be carried out on this regard. Alongside, we also denote future research directions to be investigated extensively as to how AI influences the marketing mix strategies and decision making process in different markets. The author encourages such studies to focus on different AI mechanisms related to demographic and customer cognitive factors. More studies need to be carried out on maintaining innovativeness in strategic marketing decision-making related to 4Ps and planning in an AI-driven world. Conclusively, the author emphasises the knowledge required on examining effectiveness of AI and machine learning as a strategy in developing marketing and branding with reference to different industries.

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Impact of Electronic Word of Mouth on Consumer Purchase Intention in Fast Food Industry: A Conceptual Review with Special Reference to Facebook Users

Shashikala, E. D. T.¹ and Thilina, D. K.²

Electronic Word of Mouth (EWOM) communication bears the opinion of customers in getting through with their decision-making process. However, social media has brought a new perspective to EWOM, enabling users to communicate with their existing network on the internet. As of social media, Facebook is the most prominent as it is the most engaging platform compared to the other social media platforms. As it is proven by the descriptive statistical review, Facebook word of mouth is found to be significant in the context of food and beverage. Hence, the current study has opted to find out the impact of EWOM on the Consumer Purchase Intention in the Fast-Food Industry among the Facebook users. Fast food industry being one of the most competitive industries in the world, indicates that even though there is a negative EWOM towards fast food, the industry sales have grown. Therefore, it can be argued that, there isn't any impact on the negative EWOM on the purchase intention of fast food which anyway contradicts to previous scholar's findings pertaining to EWOM. Hence this is a notable research area. The review is based on the theoretical rationale and supportive empirical findings, whilst empirical evidences are presented to support the arguments. The paper concludes with research propositions to examine how EWOM makes an impact on the purchase intention of the consumer in the context of the fast-food industry. As there was not a clear notion on the behavior of the EWOM created in the Facebook environment in shaping the purchase intention, this study would direct the researchers to conduct future studies with clear, theoretical and empirical rationale.

Keywords: *Electronic Word of Mouth (EWOM), Consumer Purchase Intention (CPI), Fast Food Industry, Facebook*

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¹ Postgraduate, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka. (shashithilini2@gmail.com)

² Department of Marketing Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka. (thilinasq@kln.ac.lk)

Introduction

E-Word of Mouth (EWOM) communication has an opinion of customers (Bickart and Schindler, 2001) and reviews posted by consumers on the internet is one of the most pertinent ways of online WOM or EWOM communication (Sen and Lerman, 2007 as cited by Prasad, Gupta & Totala, 2017) and online product reviews are being carried out by consumers increasingly while pre-purchase information searches have also become very popular (Adjei et al., 2009; Zhu and Zhang, 2010 as cited by Prasad, Gupta & Totala, 2017) and these are shaping the purchase intentions (Zhang & Tran, 2009 cited by Prasad, Gupta & Totala, 2017). Social EWOM provides more or explore informal product-related recommendations through distinctive applications of social networking sites. The growing popularity of social networks such as Facebook and Twitter have transformed the way online WOM is disseminated and consumed in the digital age (Rui et al., 2013 as cited by Kudeshia & Kumar, 2017). By posting recommendations and opinions about a product or service in their profile pages on social networking sites, consumers look forward to induce friends, acquaintances or potential consumers to validate their options. Thus, the distinct social nature of social networking sites presents an interesting and proper context for examining EWOM behaviors (Kudeshia & Kumar, 2017).

Interestingly, fWOM has unique features that are not shared by traditional WOM or EWOM, which bears a very low cost. fWOM can be as easy as clicking the 'like' button on advertisements. On the other hand, users can also generate WOM on Facebook with a higher level of involvement by typing comments. Thus, there emerges advanced characteristics of Facebook WOM: the level of friends' involvement. Based on the Elaboration Likelihood Model (ELM), people with high involvement in advertisements are more interested in the content of advertisements (Petty & Cacioppo, 1981) and have more positive attitudes toward advertisements (McMillan, 2000) and the respective products (Doh & Hwang, 2009) than do people who have a lesser involvement in advertisements. Because clicking the 'like', is a feature unique to Facebook, it is interesting to investigate whether it has the same level of WOM effects as does typical WOM displayed in the comments. As friends on Facebook are also friends offline, Facebook friends can also have different degrees of 'tie strength' with each user, strong tie vs. weak tie (Granovetter, 1973). Previous researchers have indicated that people trust their friends with strong ties more than those with weak tie (Gilbert and Karahalios, 2009; as cited by Wu, Wang and Hsu, 2013).

It has been proven by many researches that the EWOM is very influential when it comes to consumer decision making. (Bickart and Schindler, 2001; Chan and Ngai, 2011; Kumar and Benbasat, 2006; See-To and Ho, 2014). This is a very convenient way for consumers to share their decisions (Schau et al., 2009). Barton (2006) pointed out that EWOM can take place on digital platforms in which, purchase decisions are performed. The power of EWOM is such, that the moment the customer takes the product into consideration, that may result in making a purchase decision without any further delay. EWOM is very powerful and leads researchers to be interested in how EWOM influences the purchase intention.

Consumers try to acquire reliable information about the products because they want to reduce the perceived risk (Bettman, 1973). Therefore, EWOM can be considered a trustworthy source of information for most consumers, it plays an important role on the consumers' purchase intentions for most consumers, it plays an important role on the consumers' purchase intentions and preferences related to products, (Lau and Ng, 2001; Leskovec et al., 2007). According to Wangenheim and Bayon (2004), EWOM affects consumers' decision-making process and can lead them to change their decisions. The influence of EWOM on purchase intentions has been justified by many studies which were conducted through different EWOM

platforms (Chan and Ngai, 2011). Thus, it can be argued that EWOM and consumer purchase intention are found as interesting contexts to be investigated as per the empirical arguments and explanations found in contemporary research works.

Significance of the Context

Food is essential for human beings and food consumption patterns are different from culture to culture and country to country. As the results of globalization, it is a fact that the whole world gets along with similar consumption patterns without much cultural differences through world famous fast food outlets. The expansion of multinational fast food outlets initially concentrated on developed countries and has slowly seeped into developing countries as well. However, the term ‘fast food’ seems to be the most discussed and highlighted word in the world during the last couple of decades. Social and psychological changes such as busy lifestyles, looking for more freedom and identity, significantly impact the nutrition intake and food choices of people’s choices. Today many multinational fast food outlets such as Pizza Hut, Domino’s Pizza, KFC, MC Donalds and Burger King can be seen not only in Colombo, Gampaha and Kalutara Districts but in other areas such as Matara, Kandy and Kurunagala as well. Today with the widening trend of fast food outlets in Sri Lanka, there is a severe competition among fast food outlets with post-conflict economic growth and increasing trends of fast food consumption in Sri Lanka can be expected (Patabandige and Yapa, 2016). Being Sri Lankans, people are generally fond of the home made food but due to the adaptation to the western culture, a new food consumption experience has become popular among Sri Lankan families who in particular lives in urban areas (Saraniya and Dinesh, 2015). Fast food consumption has being encouraged by many factors, namely women in the work force, busy life style, increasing household income, urbanization, development in the tourism industry, extended life expectancy, increase in the level of education in consumers, rising per capital income, ways of socializing, fun and entertaining, promotion activities by fast food restaurants, distribution network and marketing system (Saraniya and Dinesh, 2015). Primary perception of the Sri Lankan people is that fast food is only for the high income earners. Fast food is more expensive than the ‘out-of-way’ meals in the Sri Lankan culture (Withanage and Jayasinghe, 2010).

Restaurants managers identified that EWOM is more important for customer behavior. (Jeong and Jang, 2011 as cited by Kudeshia & Kumar, 2016). This is especially important for intangible products such as restaurant services, which cannot be evaluated before the consumption experience.

Rationale of the Research Gap and Intention of the Study

The fast food industry in Sri Lanka can be considered as a very competitive industry with the rivalry being intensified every single day with the entry of new players to the market. Previous researchers have further claimed that fast food has always been connected with urban development. Whenever highly populated areas spring up in history, fast food outlets also come to that area. In the most developing countries, urbanization is the major factor that influences the consumption patterns. According to the fast food consumption pattern studies in Sri Lanka, the total income percentage that is spent on food in rural areas is 25-30% and urban areas is 60-75%. Those with higher income levels, in more urbanized areas are the most likely to seek out western fast food. This is particularly so even though it is priced high, it is usually more easily available in urban areas (Perera and Gayathree, 2017). Therefore, according to these evidences it is noted that the fast food industry is a highly competitive industry in Sri Lanka and a high rate of fast food consumption is a notable phenomenon. Thus this is a notable area for further research.

It has been depicted in the previous studies that there are many cases in which, comments on social media platforms specially on Facebook brought companies 'to their knees' and showcased the power of electronic word of mouth as well as the power of consumers in Digitized marketing environments, (Pfeffer, Zorbach & Carley 2014). Fast food industry analysis report, 2018, showed that globally, fast food generates revenue of over \$570 billion- that is bigger than the economic value of most countries. In the United States revenue was \$200 billion in 2015- quite a lot of growth since 1970 revenue of \$6 billion. It indicates that even though there is a negative EWOM towards fast food, the industry sales have grown. Therefore, that can be argued; how does this negative EWOM not impact on the consumers' purchase intention in the fast food industry in Sri Lanka (Kumar and Purbey, 2018). Furthermore, Anastasiei & Choisa, (2017) highlighted that future research can examine the effect of some mediating variables on EWOM intention and purchase intention. These mediating effects could be the type of referral message (e.g. rational or emotional) and product involvement (high or low).

The same problem has been investigated by other researchers in other research contexts but they have concluded giving different conclusions. According to the previous studies (Dichter, 1966; Hennig-Thurau et al., 2004; Mahrinasari et al., 2017), they show that EWOM in the restaurant industry is positively affected by the consumer's restaurant experience as measured by the consumer restaurant experience (CREp) metric. Bangsawan, Marquette & Mahrinasari (2017) argues contrary to this relation that EWOM is not significantly related to purchase intention. He argues further that a consumer who has a good experience at a restaurant and engages in EWOM may still not tend to dine at the restaurant again in the near future simply because consumers want different restaurant experiences. Therefore, he reviews that EWOM and purchase intentions relation may be drastically different for industries such as the restaurant industry. Some research has proved that EWOM is an important tool by which customers can gain information about service or product (Chevalier and Mayzlin, 2006) and such EWOM messages can reduce the customer's uncertainty or risk significantly (and hence trust is developed) while purchase decisions are taken, and hence the intention of purchase can be significantly affected further (Chatterjee, 2001).

According to the above depictions, there is no clear notion of how EWOM makes an impact on purchase intention, positively or negatively. In line within, it emphasizes on the performance gap and empirical gap whilst additional focus is made to examine the influence of information adoption as a mediating effect. (Kudeshia & Kumar, 2016; Farzin & Fattahi, 2018). Then, the study mainly focuses on researching "*To What Extent Electronic Word-of-Mouth makes an impact on Consumer Purchase Intention in the Fast Food Industry among Facebook users*".

Methodology

This study has followed the literature based research approach by evaluating the existing empirical evidences. It has also taken the tested factors on the given context to validate the proposed propositions for justifying the variable relationships. It has followed a mixed strategy of case reveal and systematic literature survey as the said research notion demands a rationale on industry related perspectives. This study follows a deductive approach as it brings the arguments based on existing theories and empirical evidences. Alongside that, secondary sources have been used as a research tool and findings are presented as the propositions for the future studies.

Review of Literature to Proposed Research Propositions

EWOM among Facebook Users

Social media is becoming an essential thing of people's lives. Platforms such as Facebook, Twitter, Instagram, Snapchat or LinkedIn have a wide user base and keeps growing every day. The worldwide rate of social media usage, is ever increasing. In 2016, 68.3% of internet users were social media users and these figures are expected to grow. Social networking is one of the most popular online activities with high user engagement rates and expanding mobile possibilities. The number of worldwide social media users is expected to reach some 2.95 billion by 2020 around a third of Earth's entire population (Statista, 2017). These Social Networking Sites (SNS), allow individuals to build a profile within an enclosed system, formulate the list of other users with whom they share a connection, and view and crisscross with others within the system (Shibly and Mahadin, 2017).

EWOM is faster to reach local communities through the internet. Furthermore, the information sources of traditional WOM are familiar people, whereas online consumer reviews come from unknown former purchasers (Ratchford, 2001 et al., Wu, Wang and Hsu, 2013). However, Facebook Word of Mouth (fWOM) merges EWOM and traditional WOM and has the advantages of both. The information sources of fWOM are friends or family, just like traditional WOM and it can spread far beyond the local areas as with EWOM. Consumers can click one button to spread their opinions on Facebook, which is easier than typical EWOM and increases accessibility of information. Thus, fWOM could completely transmit the content of advertisements and the information would not be distorted. These differences allow Facebook to be a good medium of advertisement. As friends on Facebook are also friends offline, Facebook friends can also have different degrees of 'tie strength' with each user, strong tie vs. weak tie (Granovetter, 1973 as cited by Wu, Wang and Hsu; 2013). Previous research has indicated that people trust their friends with strong ties more than those with weak ties (Gilbert & Karahalios, 2009 as cited by Wu, Wang and Hsu; 2013). However, 'weak tie friends' usually outnumber 'strong tie friends' on Facebook.

Wu, Wang and Hsu, 2013 argues that EWOM impact is different, the differences are, such as product attitude (Doh & Hwang, 2009), consumer's product judgment (M. Lee & Youn, 2009), purchasing behaviours (Chevalier & Mayzlin, 2006), and intentions to visit a web page (Zhang, Ye, Law & Li, 2010). Due to the features of Facebook, the effects of fWOM manifest in terms of three different dimensions: attitude towards the product, intention to purchase and intention to click. 'Product attitude' is defined as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly & Chaiken, 2007). 'Intention to purchase' is defined as the probability or willingness to buy a product (Dodds, Monroe, & Grewal, 1991). Finally, 'intention to click' is defined as occurring when people want to acquire more detailed information about the product by clicking the advertisements (Briggs & Hollis, 1997). For this reason, the different percentage of friend involvement in advertisements may create different fWOM effects.

Theoretical Background of EWOM

Technology Acceptance Model (TAM)

Davis (1989) developed TAM, which is one of the most popular research models to predict use and acceptance of information systems and technology by individual users. TAM has been widely studied and verified by different studies that examine the individual technology acceptance behavior in different information constructions. (Surendran, 2015). TAM was derived from the Theory of Reasoned Action (TRA). TAM has two main constructs which are "perceived usefulness" and "perceived ease of use" (Davis, 1989), for predicting an individual

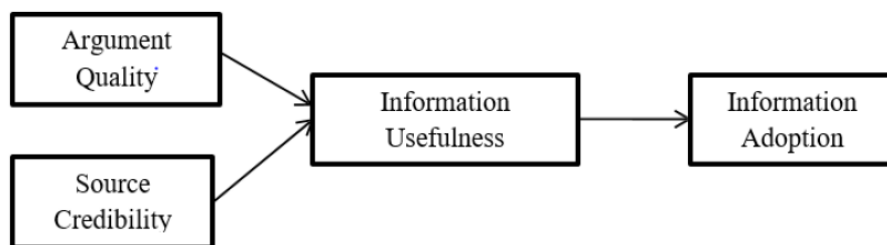
attitude towards accepting certain technology. Therefore, it is widely used by researchers within different contexts such as internet usage and social media usage (Porter and Donthu, 2006, Rauniar et al., 2014 as cited by Erkan, 2016).

The use of TAM is not deemed to be appropriate for this study, although some of its key components have been employed. This study therefore has preferred to develop its own study model; IAM in order to explore how the information obtained in computer mediated communication platforms, is internalized and accepted by consumers. To do so, IAM (Sussman and Siegal, 2003) was extended with the related components of TRA.

Information Adoption Model (IAM)

In the discussed research context, dual process theories have been taken in to consideration in explaining how people are influenced in adopting ideas, knowledge or information. EWOM conversations consist of basic information transfer, whereas the influence of the information might change from person to person. IAM is proposed by integrating TAM (Davis, 1989). To understand how people, internalize the information the IAM has four components: argument quality, source credibility, information usefulness and information adoption. (Arumugan and Omar, 2015).

Figure 1: Information Adoption Model



Source: Information Adoption Model (Sussman and Siegal, 2003)

The components of IAM are applied into this study as information quality, information credibility and information adoption. More specifically, this study argues that the influence of EWOM on Facebook not only depends on the characteristics of EWOM information, but also depends on consumers' behaviors towards EWOM information. The developed model in this study, IAM, therefore extends the IAM through considering behaviours of consumers towards information. The components relating to consumers' behavior towards EWOM information are derived from TRA.

Theory of Reasoned Action (TRA)

The TRA was developed by Martin Fishbein and Icek Ajzen (1975) as an improvement over Information Integration Theory (Fishbein and Icek Ajzen, 1975). There are two important changes. First, Reasoned Action adds another element in the process of persuasion, behavioral intention. Rather than attempt to predict attitudes, as do information Integration Theory, Reasoned Action is explicitly concerned with behavior. However, this theory also recognizes that there are situations or factors that limit the influence of attitude on behavior (Gopi and Ramayah, 2007). Therefore, Reasoned Action predicts behavioral intention, a compromise between stopping at attitude predictions and actually predicting behavior. Because it separates behavioral intention from behavior, Reasoned Action also discusses the factors that limit the influence of attitudes or behavioral intention on behavior. This theory has been frequently used by the previous research regarding the relationship between EWOM and Purchase

Intention (Cheung and Thadani, 2012 as cited by Ekran, 2016). This relationship was proposed by TPB (Ajzen, 1985). However, Miller (2002) argues that if a person's personality is not influenced by thoughts of others, then subjective norms would carry little weight in predicting the intention or behavior. Therefore, only the aforementioned two constructs are borrowed and applied as attitudes towards information and purchase intention in this study.

EWOM Determinants

Intention to purchase has been tested by researchers in many different contexts. As an example, Creyer (1997) examined the influence of firm behavior on purchase intention; while Chang and Chen (2008) tested the impact of online store environment on purchase intention. The relationship between 3D advertising and purchase intention has been studied by Li et al. (2002); while Laroche et al. (1996) study focuses on the relationship between brand familiarity and purchase intention. Moreover, previous researchers have also found several factors which influence consumers' purchase intentions such as information quality (Lee and Shin, 2014; Park et al., 2007), information credibility (Nabi and Hendriks, 2003; Prendergast et al., 2010) and information usefulness (Lee and Koo, 2015). More specially, Lee and Shin (2014) conducted a web-based experiment to examine how the quality of online product reviews influences the participants' opinions. The results showed that high-quality reviews led participants to have stronger purchase intentions (Lee and Shin, 2014). Prendergast et al. (2010) have studied the persuasiveness (credibility) of messages shared in online forums and as a result, a positive relationship has been determined between information credibility and consumers' purchase intentions (Prendergast et al., 2010). Furthermore, Lee and Koo (2015) conducted an experiment on online reviews to test the relationship between message usefulness and purchase intention. The results showed that information usefulness is positively associated with purchase intention (Lee and Koo, 2015 as cited by Erkan; 2016). Erkan (2016) says these aforementioned factors have been employed in order to understand the influence of EWOM on Facebook on consumers' purchase intentions.

On the other hand, aforementioned factors mostly focus on the characteristics of information which influence purchase intention. However, Knoll (2015) argues that there might be some determinants which involve consumers' behavior towards information. The model of the study evaluates the characteristics of EWOM information along with consumer behaviour (i.e. needs of information, attitudes and adoption). Needs of information had previously been used as "advice seeking" (Hennig-Thurau et al., 2004; Wolny and Mueller, 2013). Hennig-Thurau et al. (2004) found this factor to be one of the determinants of EWOM engagement, while Wolny and Mueller (2013) did not confirm this result in their study examining the EWOM engagement on social media. Information Usefulness is tested, by Erkan (2016), in his study as one of the antecedents of purchase intention. People who need useful EWOM information on social media are more likely to find them adoptable. Moreover, Erkan (2016) tested in his study "attitude" as another determinant of purchase intention. The relationship between the attitude and behavioral intention was previously proposed by several theories such as "Theory of Reasoned Action (TRA)" (Fishbein and Ajzen, 1975), "Theory of Planned Behavior (TPB)" (Ajzen, 1985) and "Technology Acceptance Model" (TAM) (Davis, 1989). Erkan (2016), in his study considers information adoption to be a further potential antecedent of purchase intention. Consumers who adopt EWOM information which they received are more likely to have higher purchase intentions. This relationship has been empirically tested by Erkan (2016).

Controlling variables of Electronic Word of Mouth (EWOM) and Consumer Purchase Intention

Mahapatra and Mishra, 2017 considers ‘attitude’ as a mediating role of EWOM. Further they determined that classical information processing and response frameworks, Strong’s (1925) attention, interest desire and action model, Roger’s (1995) innovation adoption model, McGuire’s (2001) five stage information processing model and Petty and Cacioppo’s (1986) ELM. These models assume that message communication influences a receiver’s attitude and subsequent behavior, in that sequence and the decision to pass a message forward or not follows the attitude towards the received information. Previous studies Cheung et al., (2009) proposed a positive and strong association between positive message evaluation, banked on credibility, leading to acceptance and forwarding of EWOM and thus, it seems that forwarding occurs only when consumers find information valuable and develop a positive attitude (Phelps et al., 2004). In their recent study, Cho et al. (2014) also established that a message from known group members who enjoy high trust and harmonious relationships are more likely to be noticed, opened and forwarded, as the message is perceived to be more informative, entertaining and less risky (Mazzarol et al., 2007). Furthermore, Chu and Kim (2011) suggested that consumers carefully evaluate source and message credibility before forwarding a message to other members with close ties. Furthermore, Mahapatra and Mishra, 2017 determined moderating role of regulatory focus. Thus, it is notable that Information Adoption has a moderating effect between EWOM and Information Adoption.

P1: There is a positive impact between EWOM and Consumer Purchase Intention

Research has proved that EWOM is an important tool by which customers can gain information about service or product (Chevalier and Mayzlin, 2006) and such EWOM message can reduce a customer’s uncertainty or risk significantly (and hence trust is developed) while purchase decisions are taken and hence the intention of purchase or purchase decision making can be significantly affected further (Chatterjee, 2001). Therefore, above proposition is proposed.

P2 - Quality of EWOM information is positively related to Adoption of EWOM information.

‘Information Quality’ refers to the persuasive strength of the message. Consumers consider the information useful when they consider the quality of information as high and satisfying. Therefore, the information quality has been considered as an important element by the research in different contexts. It has also been studied within the EWOM context; in fact, previous researchers found that the quality of online reviews has a positive influence on purchase intention (Park et al., 2007 as cited by Ekran, 2016). For this reason, this study predicts the ‘quality of EWOM information’ as one of the determinants of EWOM information on Facebook which influences consumers’ purchase intentions and it is influential on the usefulness of EWOM information.

P3 - Credibility of EWOM information is positively related to Adoption of EWOM information

Information Credibility refers to a message receiver’s perception of the credibility of a message. According to Cheung et al. (2008), consumers find the information more useful when they consider it to be credible. Significant importance has been given by previous researchers to information credibility and find information credibility to be the main determinants in the decision making process. In fact, prior studies have also shown the influence of information credibility on information adoption and consumers’ purchase intentions. (Nabi & Hendriks, 2003 as cited by Ekran, 2016). Therefore, based on the Information Adoption Model (IAM), this study predicts that the credibility of EWOM information is positively related to usefulness of EWOM information.

P4 - Attitudes towards information is positively related to Adoption of EWOM information

Attitude towards information is another factor which this study considered as one of the determinants of EWOM information on Facebook which influences consumers' purchase intentions. This component is adapted from Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA). Attitudes of consumers' regarding EWOM have been examined in several studies (Park et al., 2007 as cited by Ekran, 2016). Consumers who have positive attitudes towards EWOM information on Facebook are more likely to find them more useful and adoptable. (Ekran, 2016). Therefore, attitude towards information is added as a dependent variable and the above proposition is proposed.

P5 - Attitude towards the EWOM information is positively related to Consumers' Purchase Intention

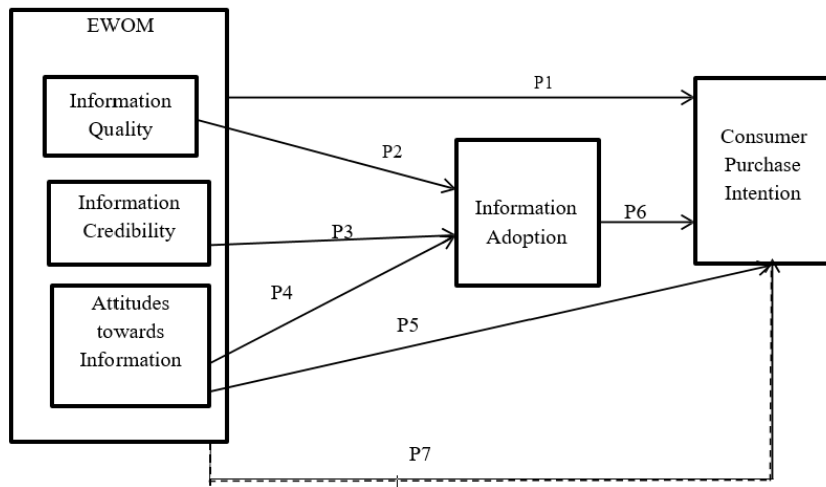
Attitude towards Information and Consumer Purchase Intention are more likely to have higher purchase intentions if they have positive attitudes towards EWOM information on Facebook. The influence of attitudes of consumers on behavioral intentions has been highlighted and has strongly been validated in several theories (Ekran, 2016). In addition to the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975), Theory of Planned Behavior (TPB) (Ajzen, 1985) and Technology Acceptance Model (TAM) (Davis, 1989) also indicate the relationship between attitude and behavioral intentions (Ekran, 2016). Therefore, using TRA, this study proposes that attitudes of Facebook users towards EWOM information can have a positive effect on consumers' purchase intentions.

P6 - Adoption of EWOM information is positively related to Consumer' Purchase Intention

Social media users, either intentionally or unintentionally become exposed to a lot of EWOM information and prior studies have found such information to be effective on the consumers' purchase intentions. However, not all EWOM information on Facebook has the same effect on consumers; the level of impact can vary (Yang, 2012 As cited by Ekran, 2016). Consumers who adopt EWOM information which they received are more likely to have higher purchase intentions (Ekran, 2016). Therefore, through linking the IAM and TRA, this study proposes the following proposition.

P7 - Information Adoption mediates the relationship between EWOM and Consumer Purchase Intention

According to the Information Adoption Model and previous researchers Information Adoption can be identified as a mediator between EWOM and Consumer Purchase Intention (Ekran, 2016). This is the indirect path/ impact between independent variable and dependent variable. Thus, above proposition can be formed.

Figure 2: Conceptual Frame

Source: Author

Conclusion and Future Research

Based on the arguments and discussions made in this paper, suggested propositions can be conceptualized with two main concepts called “Consumer Buying Intention” and “Electronic Word of Mouth (EWOM)”. Consequently, the contribution of this study can be introduced with theoretical and practical implications.

The main objective of this study was to develop a theoretical model to examine the determinants of EWOM information on Facebook which influences Consumer Purchase Intention. The model was developed based on the Information Adoption Model and Technology Acceptance Model and identified the impact of each EWOM dimensions on Information Adoption. Attitudes towards information is added, as new determinants are examined as a positive impact on Consumer Purchase Intention. This gives a new insight to the theory. Future researchers can compare the impact of EWOM information on other social media platforms. In addition, a comparison of different social media of EWOM information may bring new theoretical and practical implications.

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Role of Event Marketing in developing Brand Trust and Brand Loyalty: with Special Reference to the Mobile Telecommunication Industry in Sri Lanka

Gunawardane, W. A. D. N. R.¹

Event marketing appears to be an innovative technique which used by mobile telecommunication companies in order to influence their customers towards a brand relationship. Evidence from literature revealed that the impact of event marketing in creating consumer brand trust and brand loyalty is inconclusive. Further the relationship between brand trust and brand loyalty is influenced by consumer gender and brand commitment. Thus, the purpose of this study is to identify the significance of event marketing on creating consumer brand trust and brand loyalty with a varies impact by consumer brand commitment and gender in Mobile Telecommunication industry of Sri Lanka. The study adopted survey method in order to collect data. The study collected data from three hundred and forty-three (343) respondent using self-administrative questioner. The relationship among event marketing and brand loyalty was significant and the study identified that event marketing could result in creating both brand trust and brand loyalty. Further the brand trust partially mediates the impact of event marketing on brand loyalty. Moreover, the study supported moderating effect of consumer gender and brand commitment on the relationship between brand trust and brand loyalty. The study reveals the importance of event marketing in creating brand trust and brand loyalty of mobile customers, and need of taking gender composition and brand commitment among their consumers in such attempts. The research findings contribute to the relationship marketing literature by providing new insights into event marketing-on of the relationship marketing tools.

Keywords: *Brand Commitment, Brand Loyalty, Brand Trust, Event Marketing, Mobile Telecommunication Sector in Sri Lanka*

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¹ Department of Marketing Management, University of Kelaniya, Sri Lanka.
(nisalgunawardane@kln.ac.lk)

Introduction

Event marketing is viewed as a “persuasive communication tool whose purpose is to disseminate a company’s marketing messages by involving the target groups in an experiential activity” (Tafesse, 2016). Further event marketing considered as a relationship marketing mechanism which enhance consumer relationship with the brand (Jackson, 2013). World Sponsorship Monitor reported that telecommunication companies spent US\$800 million on sports, arts and broadcasting event sponsorships in order to build brand presence in markets and in consumers’ minds (Santomier, 2008). Yet, it has been argued that knowledge about event related marketing and its outcome in the organizational context is low and yet to be test in both international and local contexts (Winkelmann, 2016 ; Gunawardane, Munasinghe, & Disanayake, 2016).

Commitment Trust Theory (Morgan & Hunt, 1994) in relationship marketing examines the impact of commitment and trust as key mediators in relationship building. Commitment trust theory indicates a relationship among shared values (promotional tactics) and a negative ‘propensity to leave’ behavior, the aforesaid relationship being mediated by relationship commitment. Yet, the role of “trust “as a mediator in between shared values and the negative ‘propensity to leave’ behavior has not been discussed in commitment trust theory (Rutherford, 2007). Connecting Theory of Brand Loyalty (Sheth & Park, 1974) which postulates a direct relationship from trust to brand loyalty, where brand loyalty could be created through trust as an emotive construct. Further, in contrast to above theoretical constructs, empirical studies related to marketing promotions and experiential marketing, reveal that event marketing activities could not create consumer brand trust leading to brand loyalty (Tibebe & Singh, 2015; Marist, Yuliati, & Najib, 2014 ; Reisegg, 2012 ;Dewanti, Chu, & Wibisono, 2011). Yet Crowther, (2011) , Zarantonello & Schmitt, (2013) and Close & Lacey, (2013) indicates that event marketing resulted in creating consumer brand trust leading to brand loyalty.

Hence, by analyzing above theoretical and empirical notions it could be postulated that the effect of event marketing in building consumer brand trust and loyalty has not yet been established. Supporting the same notion, Sarwar, Abbasi, and Pervaiz, (2012) identified the importance of examining the relationship between brand trust and brand loyalty, with a moderating effect is important. Paulssen and Roulet, (2014) proposed to test brand commitment and Geçti and Zengin, (2013) proposed to test gender as moderators acting on the relationship between brand trust and brand loyalty. With the aforementioned theoretical implications we could understand the underlying problem of the study as *when is the event marketing create trust among consumers leading to brand loyalty is not yet clarify*.

Mobile Telecommunication players are facing a significant problem in customer loyalty, where the industry is heavily affected by consumer switching (Silva & Yapa., 2009). When analyzing mobile service providers’ expenses on marketing activities, they can be observed to be rising, and a considerable portion of marketing expenses are incurred on event based brand development programs.(Etisalat, 2016;Axiata, 2015). Amongst them road shows, town storming activities, and event sponsorships are highly evident. The notable fact is that even though customer participation is high in those events, yet it fails to retain customers with the brand, which is one of the prime objectives of the firms that undertake such event marketing campaigns in order to develop consumer relationships with the brand. This study attempts to investigate and explain the contribution of Commitment trust theory to the field of event marketing, in developing brand trust leading to brand loyalty with reference to Mobile Telecommunication Industry.

The reminder of the paper is structured as follows: in the next section it presents an in- depth review of the literature pertaining to the study. The section which follows will construct the

hypotheses of the study and the conceptual framework. The final sections of the paper present the methodology, data analysis process, discussion, theoretical contribution, contribution to practice, and directions for future research. The paper ends with the conclusions based on the findings of the study.

Literature Review

Event Marketing

In emerging market, to survive from hyper competition, companies need to find and invest in new and innovative media. Here, event marketing emerges as a new mode of marketing communication which could grab the attention of customers (Tafesse, 2016). However, companies are still unclear about the role of event marketing, and are not in a position to measure the effectiveness of an event marketing program (Martensen, Gronholdt, Bendtsen, & Jensen, 2007). As Johnson (2008) suggests in his study, event marketing is best suited for products or services which cannot be experienced at any other point (cell phone & automotive brands). The FMCG, automobile, credit card and mobile device industries have conducted studies related to the event marketing perspective (Johnson, 2008), and these studies postulate that the above-mentioned industries should practice event marketing in order to bring their core brand messages across to their customer groups.

Event marketing is fast emerging as a promotional catalyst when compared to traditional marketing communication tools (Tafesse, 2016) which Increasing corporate disillusionment with traditional media due to increased clutter, escalating costs and reduced efficiency has created opportunities for event marketing. Event marketing allows a company to break through the advertising clutter, and target an audience by enhancing or creating an image through an association with a particular event, while reinforcing the product or service, and thus driving sales. (Gupta, 2003)

Event Marketing can be defined as “A communication tool whose purpose is to disseminate a company’s marketing messages by involving the target group in an experiential activity” (Drengner, Gaus, & Jahn, 2008). Today, marketing strategy and tactics have changed dramatically, where companies use new platforms in order to promote the brand and product offerings to customers. Event marketing is one of the new tools that come under this platform (Kottler & Keller, 2012). Jackson (2013) suggests that events are a tactical means of achieving relationship management. When considering how discrete events can build relationships with their stakeholders, Braggs (2006) suggests that marketers should use events as a means of enhancing their relationships with key audiences. According to Goldblatt (2002), an event manager should use event marketing in order to build a solid relationship with the target audience and thus to build consumer loyalty and word of mouth endorsement for a stronger customer relationship.

The most important characteristic of event marketing is the high involvement of consumers with the activity (Krishen, & Latour, 2009). The main logic behind event marketing is that it puts the brand or the product in the consumer’s habitual territory where he/she has an opportunity to engage with the brand (Tafesse, 2016). Also, event marketing is an approach that possesses experiential richness, and therefore scholars refer to event marketing as an experiential marketing activity (Altschwager, Conduit, & Goodman, 2013; Wood, 2009). Promotional events allow consumers to engage with the brand sensorially, emotionally and through embodied actions (Tafesse, 2016; Rinallo et al., 2010; Zarantonello & Schmitt, 2013).

Commitment Trust tTheory (CTT)

CTT was introduced by Morgan and Hunt, (1994) and it talks about relationship marketing perspectives from four (4) main angles - Supplier Partnership, Lateral Partnership, Buyer Partnership and Internal Partnership. The literature on trust suggests that confidence on the part of the trusting party results from the firm belief that the trustworthy party is reliable and has high integrity, both of which are associated with such qualities as consistency, competence, honesty, fair play, responsibility, helpfulness, and benevolence (Altman & Taylor 1973; Dwyer & La Gace 1986; Larzel-ere & Huston 1980; Rotter 1971 as cited by Morgan & Hunt, 1994). A handful of articles have explored some moderating variables impacting the commitment-trust relationship. (Sharma & Patterson 2000) investigated switching costs, product-norm experience, and alternative attractiveness as moderators among trust, service satisfaction and relationship commitment, and it is mentioned here that switching costs were defined as the exit barriers that hold consumers in a relationship with their seller/suppliers (Morgan & Hunt, 1994). There is a strong need for further and more contemporary investigations of these and other moderators to aid a better understanding of the contextual bonds that influence the relationship between these two constructs

In CTT, Morgan and Hunt (1994) developed the key mediating variable (KMV) model of relationship marketing. According to them, the KMV model positioned trust and commitment as mediating variables between five antecedents (relationship termination cost, relationship benefits, shared values, communication, and opportunistic behavior) and five outcomes (acquiescence, negative propensity to leave, co-operation, functional conflict, and decision-making uncertainty). They defined each of these antecedents and outcomes as follows.

Termination costs refer to all expected losses from termination and result from the perceived lack of comparable potential alternative partners, relationship dissolution expenses, and/or substantial switching costs. These expected termination costs lead to an ongoing relationship being viewed as important, thus generating commitment to the relationship. But in the research conducted by Mukherjee and Nath, (2007), it was found that termination costs do not support relationship commitment. This is in contrast to the work of (Morgan & Hunt, 1994). According to Mukherjee and Nath, (2007), the possible reason for this is their conceptualization of termination cost, not just as economic cost but as psychic cost as well. Another explanation of this result is that these researchers 'conceptualization of commitment is more of the affective type, as opposed to the normative or continuance type, as is explained in the three-component model of commitment (Mukherjee & Nath, 2007).

Relationship benefits refer to the superior benefits received from the partnership, relative to other options, such as product profitability, customer satisfaction, and product performance, and customers who value these benefits will be committed to the relationship. Shared values refer to the extent to which partners have beliefs in common about what behaviors, goals, and policies are important or unimportant, appropriate or inappropriate, and right or wrong. Shared values have become a variable of great interest to organizational researchers, especially in the organizational commitment literature (Chatman 1991, as cited by Morgan and Hunt, 1994). By measuring shared values in terms of shared ethical values, these researchers contributed significantly to the development of both relationship commitment and trust literature. However, other types of shared values, for example, relating to product quality, promotional tactics, or customer service could also further the development of commitment and trust in relational exchanges (Morgan & Hunt, 1994). According to the description given by (Morgan & Hunt, 1994), shared values can be further extended to promotional tactics, where event marketing is considered to be one of the promotional tactics which markets use extensively today (Jackson, 2013).

Brand Trust

The aim of marketing practices is to create a strong bond between the consumer and the brand, and the main input for, or the chief ingredient of this bond is trust (Chaudhuri & Holbrook, 2002). Empirical evidence proves that trust has seldom been examined from the consumer's point of view, especially by those who are in the consumer brand domain (Delgado-ballester, 2004). Brand trust is one component which creates consumer satisfaction towards a product or a service, and this is the tendency to believe in the performance of the brand. Chaudhuri and Holbrook, (2001) define brand trust as the "willingness of the average consumer to rely on the ability of the brand to perform its stated function". Brand trust is a multi-dimensional concept which includes two main components, namely, brand reliability and brand intentionality (Delgado, Ballester & Aleman, 2003). The first dimension is related to the assumption that the brand has the required capacity to respond to the customer's need, and the second dimension, which is related to brand intention, is more abstract due to its affective and emotional roots (Delgado-Ballester & Munuera Alemán, 2001).

Brand trust enhances the consumer's positive feelings about a product or service, and this compels the consumer to reduce, in his/her mind, the risk associated with the choice (Matzler, Krauter, & Bidmon, 2008). According to Chaudhuri and Holbrook (2001) the definition of brand trust has been widely accepted and adopted in research, but in certain contexts it has been argued that trust could also be based on the emotional bond that the consumer has with the product or service (Hawass, 2013). Consumer attitudes and brand related behaviors are affected by brand trust, and this includes attitudinal and behavioral loyalty, purchase intention of the consumer, perception of the consumer, commitment and brand value (Chaudhuri & Holbrook 2001; Delgado, Ballester & Aleman, 2003).

Lau and Lee (1999) define trust in a brand as "a consumer's willingness to rely on the brand in the face of risk because of expectations that the brand will cause positive outcomes". Lau and Lee (1999) developed a research model which determines a set of antecedents that affect consumers' trust in a brand, and this is known as brand predictability. A predictable brand allows a customer to accurately expect its performance level each time the brand is used, when a customer likes a brand, he/she would be motivated to find out more about it, and thus sets the stage for trusting it,

Brand competence competent brand is capable of effectively solving consumer problems and meeting consumers' expectations, Brand reputation the reputation of a brand will be traced in the opinions of customers regarding its reliability and competence. Trust could collapse at the first disappointment in purchase, and as a result, the relationship between product and customer could change as trust decreases or is eliminated. Some of the behavioral outcomes of brand trust identified in the extant literature include brand preference, brand attachment and brand loyalty (Chinomona, 2013).

Brand Commitment

Brand commitment is the relationship that exists between the company and the consumer (Chaudhuri & Holbrook, 2002). Brand commitment is defined here as the average consumer's long term behavioral and attitudinal disposition towards the relational brand (Chaudhuri & Holbrook, 2002). According to Morgan and Hunt (1994), trust and commitment are the key relational variables that encourage the respective partners in a relationship. Brand commitment reduces customer uncertainty and saves the customer from seeking new relational exchanges (Chaudhuri & Holbrook, 2002). The key contribution to any relationship is commitment by the parties concerned, and commitment means an individual's long term orientation towards a relationship, which includes psychological attachment (Rusbult, 1983).

Also, marketing and consumer behavior literature identifies commitment as a key construct for relationship management and it is considered to be the focal point of relationship marketing (Morgan & Hunt, 1994).

Some researchers argue that brand commitment is a necessary and sufficient condition for brand loyalty (Tifferet & Herstein, 2012). However, Warrington & Shim (2000) argue that brand commitment and brand loyalty are closely related yet different constructs. The difference lies in the division between the behavioral concept and the attitudinal concept. Brand commitment is defined as an emotional or psychological attachment to a product or service class (Lastovicka, & Gardner, 1977), Brand loyalty can be viewed from the behavioral perspective (Park, Assael & Chaib, 1987). Brand commitment is a factor which leads to brand citizenship behavior, which strengthens the overall brand loyalty (Preez & Bendixen, 2015). The presence of consumer-held commitment is an essential component of a robust brand relationship (Sung & Choi, 2010; Fullerton, 2005). Brand commitment is also distinct from brand loyalty in a consumer-brand relationship context (Sung & Campbell, 2009; Warrington & Shim, 2000).

Theory of Brand Loyalty (TBL)

Brand loyalty is a well-established yet differently defined construct (Jacoby, Kyner, Jacoby, & Kyner, 1973; Sheth & Park, 1974; Karunaratne & Wanninayake, 2018). There were theories from physiological literature which attempt to explain the concept of brand loyalty, yet the connectionist and cognitive theories has not given a unified explanation of brand loyalty to marketers (Wheeler, 1974).

By identifying the above notion Sheth and Park, (1974) had introduced the theory of brand loyalty with the supporting of prior empirical evidences. Sheth and Park, (1974) mentioned that brand loyalty is being a multidimensional construct and brand loyalty only cannot support with repeat purchase attributes where even people who never buy the products may loyal to some brands which they only consumers of the product. Further brand loyalty exists at non behavioral levels where emotive aspects of the consumer will lead to the brand loyalty. TBL define brand loyalty at three different levels as emotive tendency, evaluative tendency and behavioral tendency which theories that not all the three dimensions are present at every situation where brand loyalty prevails. For this empirical paper it used only the emotive aspect of the brand loyalty e.g trust in order to conceptualize the theoretical argument.

According to Sheth and Park, (1974) there are many theories which tries to identify the brand loyalty from behavioral perspective (Prank, 1968 ; Prank, Ronal , William , and Lodahl, 1969; Wanninayake & Chovancova 2012) yet all is pretty inconclusive. TBL theories the consumer in to four main areas as (1) purchasing agent, (2) choice maker, (3) user, and (4) combination of all the three roles. Moreover, based on emotive tendency, evaluative tendency and behavioral tendency the brand loyalty has divide in to seven different types of brand loyalties in consumer psychology.

Brand Loyalty

Recent studies have revealed brand loyalty as a multivariate construct, and as such, it is in need of multivariate measurements (Vishwas Maheshwari, 2014). One of the first definitions of brand loyalty was proposed in 1973 by Jacoby and Kyner as “the biased behavioral response expressed over time by some decision making unit with respect to one or more alternative brands out of a set of such brands, and is a function of a psychological process” (Touzani & Temessek, 2009). Brand loyalty is one of the antecedents that express the customer’s feelings of satisfaction about the performance of the product or service (Delgado-Ballester & Munuera-Alemán, 2001).

According to Oliver, (1999), brand loyalty comprises of four main characteristics, namely, cognitive loyalty, affective loyalty, connotation loyalty and action loyalty. According to Schiffman and Kanuk, (2000) brand loyalty could be divided into two parts, namely, affective loyalty and action loyalty. Affective loyalty measures the consumer's overall feelings about a product or a brand and towards his/her purchase intention. Action loyalty focuses on the responses to the stimulation of sales promotional activities, performed with the aim of inducing purchase intention of a product or a brand. Many researchers emphasize that affective loyalty and action loyalty should be simultaneously measured in order to identify consumers' real brand loyalty (Chaudhuri & Hoibrook, 2001; Wanninayake, 2014). True brand loyalty contains some indicators of previous psychological and affective attachment to the brand (Lin, 2010). In the composite approach to loyalty, for a customer to be truly loyal, he/she must have a favorable and positive attitude towards the brand, despite showing repeat purchase behavior. Also, it identifies that a direct influence from relative attitude could not be expected for repeat purchases behavior of the consumer. This approach also identifies that consumer attitude has an influence on repeat purchase behavior through variety seeking behavior and enhancing resistance to situational factors. More precisely, the composite approach expects higher relative attitude to have a negative effect on the consumer's tendency towards variety-seeking and an overall positive effect on consumers.

Consumer Gender

The effect of gender on human interaction has been studied in the socio- psychological arena. Marketing literature lacks major research studies that deal with the interaction of gender in service selling and buying situations, the effect on relationship development and customer loyalty (Ndubisi, 2005). Gender difference will impact on people's social interaction and behavior due to the different socialization processes of males and females (Wanninayake & Chovancova, 2012; Li & Chang, 2016). Gender identity and biological sex are two different concepts (Ndubisi, 2006). Majority of studies have preferred the biological sex perspective over the gender identity perspective (Khan & Rahman, 2016; Chang, 2006; Palan, 2001; Gould & Weil, 1991).

With reference to mobile service usage, scholars have identified that females have a greater tendency to use mobile phones (Totten, Lipscomb, Cook, & Lesch, 2008). Also, generally speaking, female users are more willing to use mobile services when compared to males (Anckar & D'Incau, 2002). In contrast, Constantiou, Damsga, and Knutsen, (2006) found that men are more frequent users of mobile services than women. Ndubisi, (2005) revealed in his studies that women have more and stronger inter-personal and brand relationships than men, and this research also suggests that women were more faithful to a brand than men. Moreover, some studies found that gender difference plays a vital role when it comes to decision making in online settings, since both males and females have different decision-making abilities and systems (Li & Chang, 2016). Males and females show different behavioral traits; females are comprehensive information processors who consider both subjective and objective product attributes, and respond to subtle cues. Conversely, "males are selective information processors who tend to use heuristic processing and miss subtle cues" (Khan & Rahman, 2016).

Hypotheses and Conceptual Framework

Event Marketing and Brand Loyalty

For the purpose of this empirical paper, event marketing can be defined as a communication tool whose purpose is to disseminate a company's marketing messages by involving the target group in an experiential activity (Drengner, Gaus, & Jahn, 2008). Empirically, it is supported that one of the main objectives of conducting an event marketing activity is to induce in the

consumer's mind a liking for the brand, and to increase consumer positive brand intention towards the brand (Wood, 2009; Zarantonello & Schmitt, 2015). Event marketing paves the way for consumers to experience the brand directly and with high interactive power, where consumers can have memorable experiences about the brand (Zarantonello & Schmitt, 2013). Further, Zarantonello and Schmitt (2013) indicate that event practitioners have begun to refer to event marketing as an experiential marketing activity rather than defining the objectives of events in terms of persuasion and attitudinal change. Event practitioners increasingly emphasize the fact that events can create a deeper and more meaningful brand-equity building connection with consumers (Wood, 2009).

Some authors argue that events provide organizations and brands with valuable opportunities to interactively engage with customers by providing an experiential environment to wider stakeholders in order to enhance their emotional connections with the brand, which in turn which induces loyalty (Crowther, 2011). Aaker, (1991) defined consumer brand loyalty as the measurement which indicates the consumer's attachment towards a brand.

Industry practitioners use event marketing in order to strengthen relationships with their consumers, since event marketing is considered to be a relationship marketing mechanism used in order to strengthen relationship ties with consumers (Jackson, 2013). Brand loyalty literature is perhaps most capable of informing theory concerning the consumer – brand relationship, and this consumer-brand relationship is a living experience (Fournier, 1998). Further, Fournier (1998), in Relationship Theory, propounded that experience can be developed towards a brand with an increased scope and diversity of brand related activities and heightened intensity of individual interaction events. Thus, it is hypothesized that:

H₁: Event marketing has a positive impact on brand loyalty

Event Marketing and Brand Trust

In the organizational context, trust can be described in three different ways; trust as a belief, as a decision and as an action. The initial form of trust is a subjective, aggregated, and confident set of beliefs about the other party and one's relationship with a person, which leads one to assume that the other party's likely actions will have positive outcomes for oneself (Dietz & Hartog, 2006). Further, when it comes to marketing and brand management, trust described as the willingness of the average consumer to rely on the ability of the brand to perform its stated function (Chaudhuri & Hoibrook, 2001). Brand trust is an antecedent which is created over time with the help of past experiences and prior interactions with the brand. The main reason for this is that it happens over time as a result of one's learning experience (Garbarino & Johnson, 1999). An event is a experientially rich activity which enhances consumer experience over time (Jackson, 2013), and an event in the marketing context could be defined as an experiential marketing activity which enhances consumer experience through event execution (Drengner et al., 2008). Persuasive communication theory (Ajzen, 1992) clearly states that event marketing is a communication mechanism which could create consumer trustworthiness towards a brand. This is mainly due to the persuasive way in which the brand message is communicated to consumers in an attractive manner.

Empirical studies related to event marketing claim that there could be a relationship between event marketing and brand trust (Close & Lacey, 2013), Event marketing creates an emotional attachment between the company and the consumer in the long term (Zarantonelloa & Schmittb, 2015). It is also claimed that an event could be used to develop brand trust from consumers' points of view (Jackson, 2013). The essence of an event is an experience, and it inculcates an interactive response within the consumer, which leads to the creation of a relational bond. The experiential nature of events will make the communication persuasive,

and make event attendees more attached to the brand,(Crowther, 2011). With the facts available from the literature, particularly the ability of event marketing as a consumer trust creator (Jackson, 2013), it is hypothesized that:

H₂: Event marketing has a positive impact on brand trust

Brand Trust and Brand Loyalty

Consumer loyalty is considered to be one of the most important factors in a successful organization (Oliver, 1999). Furthermore, loyalty is the way that consumers express their feelings about a product or service, when they are satisfied with the performance of the product or service (Delgado-Ballester & Munuera Alemán, 2001). Loyalty is measured using Buchanan's 1974 organizational commitment scale. Buchanan (1974) defines loyalty as the attachment or feeling of affection that a human being has for a business entity. Further, according to Aaker, (1991), brand loyalty is a concept that elaborates the attachment of an individual towards a brand

According to Larzelere and Huston (1980) and Morgan and Hunt,(1994), in relationship marketing theories, trust is considered as the central focus of any long-term relationship. Therefore, in the consumer brand context, trust is considered to be the emotional factor which leads consumers to become long term loyalty holders for a particular product or service (Hess, 1995). Further, Theory of brand loyalty (Sheth & Park, 1974) states that trust lead to consumer loyalty in the long term being trust as an emotive construct. Empirically it is established that brand trust is a construct which could lead to brand loyalty, leading to a strong consumer brand bond (Ballester & Munuera-Alemán, 2001). This is due to brand trust's ability for creating highly valued relationships with the brand (Chaudhuri & Holbrook, 2001). Therefore, brand loyalty can be said to be a part of the continual process of valuable and notable relationships which are produced by brand trust (Kabadayi & Kocakalana, 2012). Thus, it is hypothesized that:

H₃: Brand trust has a positive impact on brand loyalty

Moderating Role of Consumer Gender on the Relationship Between Brand Trust and Brand Loyalty

The difference between men and women and their behavioural impact on decision making, reactions to stimuli and their psychological and emotional needs have been studied in various disciplines.(Khan & Rahman, 2016). Gender has been identified as an important variable in consumer behavioral studies (Bendall-Lyon & Powers, 2002). Moreover, Venkatesh, Morris, and Ackerman, (2000) state that gender is an important antecedent when it comes to technologically based studies, and that women are more tech savvy in their online shopping behavior and in their decision making. Empirical studies support the fact that gender is a variable and emphasizes its impact on the individual consumer decision making process. Further, the studies provide evidence supporting the decision processing differences between men and women (Ndubisi, 2006). As indicated by Social Role Theory (Eagly & Wood, 1991) gender differences will affect people's social behavioral patterns due to different socialization patterns of males and females. This paves the way for an examination and understanding of how men and women enact behavior through proximal, psychological and biological processes from which decision making authority flows.

In many cases biological sex was found to be far more significant with respect to predicting relationships and attitudes than was gender identity (Allison et al., 1980; Gould and Weil, 1991; Kahle and Homer, 1985). Based on the findings of Khan and Rahman, (2016) we can highlight the importanc of gender as a variable in consumer desion making. In brand –

consumer relationship building, most studies have identified gender as implying biological sex (Gould & Weil, 1991). Further, Khan and Rahman's (2016) studies questioned the findings based on the gender identity perspective, and it has concluded that biological perspective of gender need more contribution to the brand-consumer relationship. Furthermore, Ndubisi, (2006) states that gender has been studied in social science research, and yet when it comes to marketing and service selling and buying, relationship development in consumer loyalty perspectives the literature related to gender is sparse, and there is a lacuna in the area which needs to be filled. Empirical studies indicate that there are a set of variables that may affect the relationship between brand trust and brand loyalty, and Geçti and Zengin, (2013) suggest that gender could be used as a moderator to test the relationship between brand trust and brand loyalty further. Gender difference enables the creation of different decision making perspectives (Eagly & Wood, 1991 ;Ndubisi, 2006) and gender acts as an variable which strengthens or weakens the relationship between brand trust and brand loyalty. Thus, it hypothesized that:

H 4: Gender moderates the relationship between brand trust and brand loyalty

Moderating Role of Brand Commitment on the Relationship Between Brand Trust and Brand Loyalty

Brand commitment represents the relationship between the brand and the consumer, which is demonstrated by the attitude and behavior of the consumer (Chaudhuri & Holbrook, 2002). Commitment is the key element in building long-term relationships between the brand and the consumer (Fullerton, 2009; Sung & Choi, 2010). Consumer commitment is an attitudinal construct which helps to develop a lasting relationship with a commercial partner (Fullerton, 2009). Consumer commitment could be broadly divided into two main parts, namely, affective commitment and continuance commitment (Fullerton, 2003; Gilliland & Bello, 2002; Harrison-Walker, 2001). When consumers enjoying doing business with their partners, both parties are affectively committed to the relationship (Fullerton, 2009). In continuance commitment both parties tend to maintain the relationship between them when a service agreement is in force, or when the existence of their relationship depends on an external force (Anderson & Weitz, 1992). Commitment is a part of the ongoing process and it maintains a valued relationship which has been influenced by trust (Chaudhuri & Holbrook, 2002). Further, brand commitment will reduce the uncertainty that a consumer has towards the brand, and thus it reduces the tendency that he/she will search for a new relational exchange with another brand. It is further argued that brand loyalty includes some degree of commitment towards the quality of the brand (Aaker, 1991). Similarly, marketing and relationship literature (Morgan & Hunt, 1994) has identified that brand commitment is an important factor in relationship building and relationship management. According to Chaudhuri and Holbrook (2001), brand commitment is an emotional and psychological attachment to a brand. CTT (Morgan & Hunt, 1994) constructs the theoretical argument behind commitment, as it mediates the relationship between trust and negative propensity to leave behavior. In this study, negative propensity to leave behavior is considered to be linked to loyalty. The more loyal the consumer, the less likely he/she will be to leave. Moreover, there could be a moderating impact by commitment on the direct relationship between trust and loyalty as per the study. Further, Paulssen and Roulet (2014) propose that the relationship between brand trust and brand loyalty could vary with the impact of brand commitment and suggested that this relationship be tested in future research studies. Thus, it hypothesized that:

H 5: Brand commitment moderates the relationship between brand trust and brand loyalty.

Mediating Role of Brand Trust on the Relationship Between Event Marketing and Brand Loyalty

A mediating relationship accounts for the relationship among the predictor and the criterion variable, where mediators tell us how or why the independent variable is able to influence the dependent variable (Baron & Kenny, 1986). Further Baron and Kenny, (1986) state that a variable becomes a mediator when it meets the following criteria. First, the variations in the levels of the independent variable must account significantly for variations in the presumed mediator. Second, the independent variable must be shown to affect the dependent variable, and third, the variations in the mediator must significantly account for variations in the dependent variable.

Indeed, in a mediating relationship, two causal paths feed into the dependent variable. The independent variable directly impacts onto the dependent variable and there is a path from the independent variable to the dependent variable going through the mediator. In other words, the independent variable impacts the mediator and the mediator impacts the dependent variable, in the second path. Consequently, the three propositions indicated above show direct relationships among (i) Event Marketing and Brand Loyalty “P₁” (ii) Event Marketing and Brand Trust “P₂” (iii) Brand Trust and Brand Loyalty “P₃”. According to Baron and Kenny, (1986) when three variables are interconnected and show a direct relationship with each other, a mediating relationship can be formed in a model by considering all three variables together. Therefore, this theoretical paper considered brand trust as a mediator impacting on the relationship between event marketing and brand loyalty.

Commitment trust theory (Morgan & Hunt, 1994) in relationship marketing indicates that trust is a mediator in relationship building. Further, a study conducted by Liao, (2015) on the mobile telecommunication market revealed that brand trust is an important mediator impacting on the relationship towards brand loyalty, with cognitive and experiential antecedents. According to Şahin, Zehir, and Kitapçı, (2011) in a study conducted to study the impact of experiential marketing on brand loyalty, brand trust was seen to act as a mediator on the relationship between the experiential marketing activity and brand loyalty, enhancing the strength of the consumer experience of brand loyalty. Event marketing, being an experientially rich marketing communication mechanism, can further validate the fact that brand trust will have a mediating impact on the relationship between event marketing and brand loyalty. Thus, it is hypothesized that:

H₆: Brand trust mediates the relationship between event marketing and brand loyalty

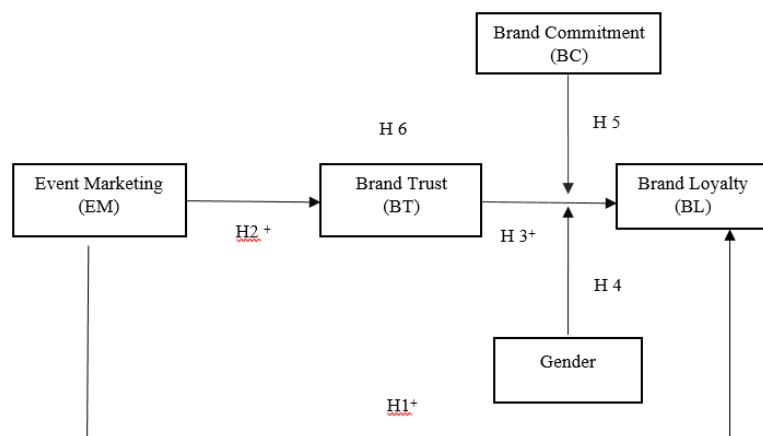


Figure 1: Conceptual framework

Methodology

Participants and Procedure

The purpose of this research study was to design and present a quantitative research work. The study represents the impact of variables and their interactions in developing consumer trust and loyalty through event marketing activities. A descriptive study undertakes to ascertain and to describe the characteristics of the variables in a situation (Sekaran & Bougie, 2010), and as such, this study is descriptive in the nature, and there is little interference by the researcher as far as the research environment is concerned.

The unit of analysis of the study is the consumers who follow the event marketing programs of mobile telecommunication providers. Most previous studies have focused on individuals in order to collect data, namely, the individuals who follow events (Wood, 2009; Goodman, 2017; Khuong, Thi, & Chau, 2017). The researcher selected events of five main mobile service providers who operate in the Western Province in order to collect data, based on researcher's own knowledge about the events, their elements and the objectives of the study (Babbie, 1997). When he selected respondents in the events, the researcher adopted the convenience sampling method where the questionnaire was distributed at events and data was collected from 343 questionnaires which were in a usable condition for the purpose of the study, yielding an effective response rate of 66 percent. Thereafter, the questionnaires were sent for data analysis. Data were analyzed using Structural Equation Modeling (SEM) with the aid of AMOS (Analysis of Moment Structure) 23.0

Measures

Event Marketing was originally measured using a five-point scale ranging from 1=strongly disagree to 5=strongly agree (Ponsonby & Boyle, 2004; Close & Lacey, 2013), and there were fifteen (15) indicators which were derived from the four main dimensions.

Brand trust was measured using a five-point scale originally, and the scale was adapted from Delgado-Ballester, (2004). The scale measures brand trust in two main dimensions using eight (8) indicators. Both event marketing and brand trust scales were increased by the researcher to seven-point scales, rating from 1= completely disagree to 7=completely agree, owing to the superior reliability of the data collected through seven-point scales (Symonds, 1924).

Brand loyalty was measured using the scale developed by (Bobalca, Gatej, & Ciobanu, 2012). The scale comes originally as a seven-point scale. The scale consists of four dimensions and twelve indicators (12). Brand commitment was measured using the scale developed by Shuv-Ami (2012), and the scale was originally developed as a seven-point scale. Brand commitment was measured in two dimensions using six indicators (6).

Reliability and Validity of Measures

Cronbach's alpha is a measurement which was developed in order to measure the internal consistency of the measures or the scales of the research (Tavakol & Dennick, 2011). The alpha values of the study were over and above the value of 0.7, which is an acceptable level (Sekaran & Bougie, 2010). Event marketing reported an alpha value of 0.742, brand trust reported an alpha value of 0.755, brand loyalty reported an alpha value of 0.857 and finally, brand commitment reported an alpha value of 0.715.

Table 1: Validity testing for variables

Variable	CR	AVE
Event Marketing	0.837	0.644
Brand Trust	0.867	0.573
Brand Loyalty	0.903	0.636
Brand Commitment	0.828	0.546

In order to proceed to check the data for convergent validity, it was necessary to calculate two measures, namely, Average Variance Extracted (AVE) and Composite Reliability (CR) which should be in the ranges of 0.5 to 0.7, respectively. In order to calculate AVE and CR values (Malhotra, 2004), the rule of thumb is that all AVE estimates should be greater than the corresponding Squared Multiple Correlation (SMC) in order to assure discriminant validity. This indicates that the measured variables have more in common with the construct they are associated with than they do with other constructs.

Table 2: Discriminant Validity

	Event Marketing	Brand Trust	Brand Loyalty	Brand Commitment
Event Marketing	0.644			
Brand Trust	0.200	0.573		
Brand Loyalty	0.134	0.401	0.636	
Brand Commitment	0.21	0.341	0.384	0.546

As all of the above requirements are fulfilled, it can be concluded that convergent and discriminant validity are satisfactory with reference to the study.

Data Analysis and Results

Prior the statistical analysis, data were fed into SPSS version 20.0 and outliers were identified. Once the outliers were removed, there were 324 respondents who qualified for the missing value test. It was then identified that there were no missing values. Further, as a prerequisite for multivariate analysis, the normality, linearity and homoscedasticity of the data were ensured. As per Table 3, the sample consists of one hundred and eighty-six (57%) males and one hundred and thirty eight (43%) females. Further, the sample consists of one hundred and thirty-two (41%) Dialog customers (which is the highest percentage), one hundred and nineteen (37%) Mobitel customers, forty six (14%) Etisalat customers and twenty seven (8%) Airtel customers. Along with the data, when the type of event in which consumers participate is considered, most customers participated in sponsorship events which account for one hundred and thirty-seven (53%) customers.

Table 3: Descriptive statistics

<i>Gender Composition of the Sample</i>		
Gender	Frequency	Valid Percent
Male	186	57.4
Female	138	42.6

Total	324	100.0
Type of the Event		
Type of the Event	Frequency	Valid Percent
Sponsorship Event	173	53.4
A Trade Show	32	9.9
Pop-Up Brand Store	54	16.7
A Product Launch	12	3.7
A Street Show	49	15.1
Other	4	1.2

The basic structural model was developed to examine the direct relationships among variables and it was identified that there were three components whose significance levels were not satisfactory, all of which were below the threshold level of .45 (Hair et al., 2012). In three steps, three (03) items of the latent variable were removed 'Event Marketing' was derived from the final first order measurement model.

Table 4: GOF Indices of the First Order Measurement Model

Absolute Fit				Incremental Fit		
CMIN/DF	GFI	AGIF	RMSEA	IFI	TLI	CFI
2.718	0.867	0.821	0.085	0.859	0.789	0.832

According to Table 4, absolute fit indices validate the fit between the observed data and the model. The incremental indices are above the 0.7 level, and therefore the construct fits the baseline model which assumes that all observed variables are uncorrelated (Hair et al., 2012).

Structural Models

The structural model indicates the hypothesized relationships among latent variables. Three structural models were drawn to check the relationships H_1 to H_3 . All the structural paths were supported for the hypotheses, and the results are depicted in Table 5 with the relevant GOF indices for the structural models.

Table 5: Path Analysis

Hypothesis				GOF Measures of the Structural Model				
Path		β value	P Value	Chi-square	CMIN/DF	GIF	CFI	RMSEA
H_1	EM \rightarrow BL	0.451	0.000	244.96	2.421	0.822	0.822	0.087
H_2	EM \rightarrow BT	0.641	0.000	448.79	2.720	0.876	0.829	0.073
H_3	BT \rightarrow BL	0.798	0.000	568.24	2.362	0.842	0.792	0.085

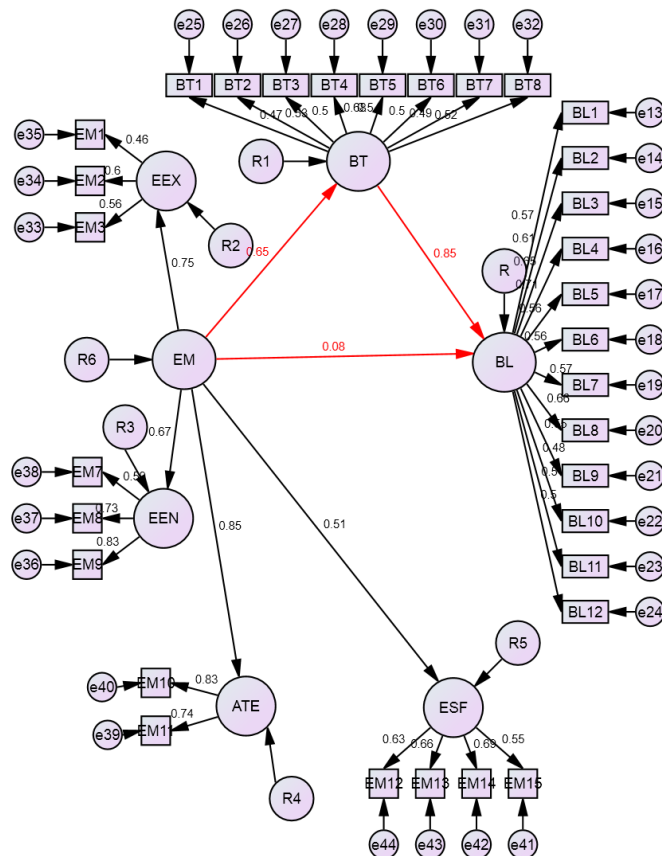
H₁ depicts the relationship between event marketing and brand loyalty and H₂ depicts the relationship between event marketing and brand trust. Finally, H₃ indicates the relationship between brand trust and brand loyalty. The findings of the hypothesis testing H₁ –H₃ were supported by the results shown in Table 5

In order to check the mediator effect, bootstrap analysis was employed. The model fit indices were checked before bootstrapping and the absolute model fit indices (CMIN/DF= 2.017, GFI = 0.792, AGIF= 0.760, RMSEA =0.079) and incremental fit indices (IFI=0.735, TLI=0.709, CFI=0.732) indicated a good model fit. The findings of the analysis are given in Table 6. The findings indicate that there is a partial mediation, and thus, H₆ was accepted and it was concluded that brand trust is a partial mediator of the relationship between event marketing and brand loyalty.

Table 6: Findings of the mediator effect

	Path	β Value
Direct Effect	EM → BL	0.075
Indirect Effect -H₆	EM → BT → BL	0.548
Total Effect	EM → BL	0.623

Figure 1: Structural model for mediation (EM → BT → BL)



*Significance at 5% level

Interactive Effects of Consumer Gender

In order to check the moderating effect of consumer gender on the relationship between brand trust and brand loyalty, the multi-group analysis method was used. The moderating effect on the main relationship was tested by a separate structural model. The GOF indices shows that it has a good model fit, as the absolute model fit indices (CMIN/DF= 2.557, GFI = 0.785, AGIF= 0.738, RMSEA =0.068) and the incremental fit indices (IFI=0.722, TLI=0.782, CFI=0.716) are satisfactory. The results of the moderator test were significant and it was identified that gender moderates the relationship between brand trust and brand loyalty. Thus, H₄ was supported and accepted and the results are given in Table 7.

Table 7: Findings of the moderating effect of consumer gender

	Male	Female
Path <i>H₄</i>	BT → BL	BT → BL
P Value	0.001	0.125

Interactive Effects of Brand Commitment

In analyzing the moderating effect of brand commitment on the relationship between brand trust and brand loyalty, the multiplication of the mean value of the mediator variable (BT) with the items in the moderator variable (BC) created a pool of mean items. The interaction items of BTBC were used in AMOS analysis. The moderating impact of the main model was tested in a single model. The final results showed that the model has an acceptable fit, as the absolute model fit indices (CMIN/DF= 2.001, GFI = 0.815, AGIF= 0.872, RMSEA =0.078) and the incremental fit indices (IFI=0.882, TLI=0.801, CFI=0.819) were satisfactory.

Table 8: Findings of the moderating effect of brand commitment

Path	P Value	β Value
BT → BL	0.000	0.659
BC → BL	0.000	0.615
BT*BC → BL <i>H₅</i>	0.001	0.545

The results of the moderator test were significant according to the AMOS output of Table 8. Thus, it could be concluded that H₅ is supported.

Theoretical Implications

Though brand management literature flourishes, the focus and the prominence given to event marketing is inadequate (Winkelmann, 2016; Wood, 2009). Event marketing can be identified as a relationship marketing tool (Jackson, 2013) which enhances customer relationship with the business. Furthermore, businesses use event marketing as a relationship building mechanism (Jackson, 2013; Close & Lacey, 2013).

Commitment trust theory (Morgan & Hunt, 1994) discussed relational exchanges and it was stated that the two main constructs of the theory were commitment and trust which play a mediating role. The theory wanted to extend its scope to marketing promotions, and promotional tactics is one such area where the theory may be useful. It is suggested that further testing should be done, since the two areas have shared values which promotional tactics comes (Morgan & Hunt, 1994). Event marketing is a promotional tactic which has a direct relationship to Integrated Marketing Communication (IMC) (Wood, 2009; Crowther, 2011; Jackson, 2013; Winkelmann, 2016) as well. In the light of the revelations of commitment trust

theory and the gap that exists in the literature in the field of event marketing, this study is both relevant and timely.

The study extends its scope to the field of consumer trust and loyalty utilizing commitment trust theory, where the relationships were derived from commitment trust theory (Morgan & Hunt, 1994). It was found that commitment mediates the relationship between shared values and negative propensity to leave behavior, where negative propensity to leave behavior was linked to consumer loyalty (Aaker, 1991). Yet the mediating effect of trust on the relationship between shared values and propensity to leave behavior has not been discussed in commitment trust theory (Rutherford, 2007). This research study intends to contribute to the body of knowledge by proposing brand trust as a predictor of brand loyalty based on the supporting of theory of brand loyalty and testing the relationship between event marketing and brand loyalty through brand trust, where brand trust acts as the mediator.

As the theoretical contribution, the researcher intends to add the effect of consumer gender as a moderator on the relationship between brand trust and brand loyalty as an addition to the commitment trust theory (Morgan & Hunt, 1994). Though the consumer may have trust in the service provider, this does not always assure his loyalty to the service provider (Sarwar et al., 2012). The gender of an individual consumer may have an impact on the relationship between brand trust and brand loyalty to strengthen or weaken that relationship. Hence, the researcher studied the impact of gender (in relationship marketing) in the area of consumer decision making and how it affects the relationship between consumer brand trust and brand loyalty in relation to commitment trust theory. The addition of gender in this study is based on a structured literature review, where one study noted that most often females were relationship oriented while men were not (Ndubisi, 2006). Further, in the study of Ndubisi, (2006), gender differences in decision-making processes of individuals are evident, and this is supported by the results. Also in the light of that notion, Kolyesnikova et al., (2009) indicate that women attached more importance to social goals such as maintaining relationships, than men did. Hence, we can identify that gender plays a major role when it comes to decision making in relationship building. Yet, a study done in Sri Lanka reveals an interestingly different outcome. Sri Lankan Mobile telecommunication consumers' use of mobile service and decision making was not found to be influenced by the consumers' gender (Abeykoon, 2017). The researcher was not able to find any other published research studies locally, for the impact of consumers' gender on the relationship between relationship marketing and decision making. This study fills that theoretical gap in the light of commitment trust theory. The study indicated that consumer gender has a significant moderating impact on the relationship between brand trust and brand loyalty.

As the second contribution to theory, the researcher desired to check the impact of brand commitment on the proposed relationship between brand trust and brand loyalty. Even when a customer has formed brand trust through event marketing, that customer may not be loyal to the brand, if the customer does not have commitment towards maintaining a relationship with the brand. Commitment may arise because of an economic reason or a psychological reason (Warrington & Shim, 2000), and this may weaken or strengthen the relationship between brand trust and brand loyalty. According to the finding of this research study, brand commitment significantly moderates the relationship between brand trust and brand loyalty. Commitment trust theory revealed the mediating effect of commitment on negative propensity to leave behavior; however, this study investigated commitment as a moderator, and the relational impact of commitment towards strengthening loyalty which is aroused by trust.

Managerial Implications

Mobile telecommunication service providers tended to invest heavily in brand building activities (Axiata, 2015; Etisalat, 2016), where event marketing is one important area in which mobile telecommunication service providers invest in Sri Lanka. As per the study, the main contribution of this research is the study of the impact of gender and consumer brand commitment on the relationship between brand trust and brand loyalty which is created by event marketing. When event marketing programs are organized, the event executors should consider the event attendees' gender composition. If event marketers can focus more on male consumers than on females, that would be ideal, because men were not found to be loyal by nature, and this event could be a mode to make them respond to brand promotions in a positive manner, by making them relationship oriented.

Mobitel does have a specially designed mobile package for females by the name of "Liyasara" (Abeykoon, 2017) which is a female-only package, this researcher suggests that it would be timely to focus particularly on the male segment as well with specially designed product attributes in order to make men feel special. For the service provider, this will eventually result in inducing a commitment towards the brand from male customers also. It launched "e-nenasala" in 2013 which sponsored by a mobile telecommunication provider (Etisalat, 2016) focused particularly on Advanced Level rural schools in order to make students' knowledge savvy. This program created an emotional bond with students at the school level. Thus, when the student reaches adulthood, he or she will tend to buy the brand they had been associated with for years. This is an emotional commitment creator with the brand in the long run, and it could make customers more attached to the brand, which in turn could strong the relationship between brand trust and brand loyalty in the long term.

Limitations and Future Research

The purpose of this research work is to study the area of consumer trust and loyalty building through event marketing activities of mobile telecommunication companies. The study extends to how event marketing as a promotional mechanism acts as a consumer acquisition driver in the mobile telecommunication sector. Consumer decision making is greatly affected by consumer gender difference, and the decision making of consumers may differ on consumer generation impact where Generation cohort and its impact on event marketing activities in building consumer brand loyalty could be a probable area for future research. The study specifically investigates the research problem of event marketing, creating consumer brand trust and brand loyalty from the consumer's perspective. However, event marketing as a brand trust and a brand loyalty creator can be further tested from event executors' points of view. This research study specifically focused on the mobile telecommunication industry, whereas future research can be further extended to the financial services sector where relationship marketing is the core of the financial services sector, and is utilized to create a sustainable set of customers in the long-term

Conclusion

This study contributed to a better understanding of event marketing as a promotional mechanism and of the role of building consumer brand trust and brand loyalty through event marketing activities. The researcher has built a conceptual model which showcases the relationship between event marketing and brand loyalty. The conceptual model was supported and used in order to identify the factors that affect the building of brand loyalty through event marketing. In today's dynamic environment, the average customer is bombarded with a range of marketing stimuli and messages, and event marketing can be used as an interactive mode of marketing communication which could help build consumer relationships with a particular

brand. Furthermore, the impact of consumer commitment and gender on building brand trust and brand loyalty is very important in the event marketing field. In addition, the moderating impact of consumer gender and consumer commitment on the relationship between brand trust and brand loyalty, have been investigated in this study.

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Factors Influencing on Purchase Intention towards Organic and Natural Cosmetics

Kumudhini, N. ¹ and Kumaran, S. S. ²

The cosmetic industry is one of the fastest growing and essential industries in the world as well as in Sri Lanka. Usage of chemical base cosmetics cause to environmental and health issues. Meanwhile there are number of organic and natural cosmetic products are available in Sri Lankan market which is not harmful for health and environment. This issue closely related on consumer behavior. Objective of study attempted to gain knowledge about influence of Consumer Attitude, subjective norm, perceived behavioral control towards Purchase Intention of organic and natural cosmetics. This research was an exploratory type research with a quantitative prospective and the population of the study consisted in above 15 years old consumers of Colombo District. To achieve the goals of this research, the data were collected from convenience sample of 200 consumers those who are lived in Colombo District. The respondents provided the data by means of a close-ended questionnaire. Multiple regression was used for testing the hypotheses. Data analysis was conducted using SPSS19 Software. This study empirically examines that Consumer Attitudes (CA), Subjective Norm (SN), Perceived Behavioral Control (PBC), Consumers' Past Experiences (PE) the independent variable and Purchase Intention for Organic and natural Cosmetic Products (PIOC) as the dependent variable. While all four the variables are significantly predicted purchase intention for organic and natural cosmetic products. And consumer attitude is the best predictor of PIOC. The results of this study also suggest that retailers can develop effective marketing strategies emphasizing ecological beauty, product safety, and affordable prices to increase consumers' intentions to buy organic and natural cosmetic products.

Keywords: *Organic and Natural Cosmetics, Purchase Intention (PI), Consumer Attitude (CA), Subjective Norm (SN), Perceived Behavioral Control (PBC)*

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¹ Department of Management, Eastern University, Sri Lanka (n.kumudhini1@gmail.com)

² Dharmanikethana place, Koswaththa, Rajagiriya, Sri Lanka. (ksathis006@gmail.com)

Introduction

Background of the Study

Beauty was a vital part of one's personality regardless of men or women. The desire for beauty has been the greatest concern of humanity across ages around the world. Today, the cosmetic market plays a major role in building up the self confidence in many of us. Cosmetics are very closely linked to beauty because makeup has been observed as an important method to express a women's desire for beauty along with clothing and accessories. The Cosmetics Industry has been one of the world's leading industry, and today the cosmetic and toiletries industry in Sri Lanka has developed rapidly. Cosmetics have been around for thousands of years ago and the use of cosmetics can be traced back to ancient times from the Egyptian, Greek, and Roman eras (Kumar, 2005; Massie, & Dumonceaux, 2006). At present, majority of people start their daily routines by wearing cosmetics. Applying cosmetics is a natural behavior for women and has become a major part of modern women's daily life.

In general, cosmetic industry consists of five categories, namely: hair care, skin care, fragrance, make up and personal care. Skin care is the fastest growing category of cosmetic industry and it includes cleanser, face cream, anti-acne products, anti-aging products, and other facial products. Beauty culture was in fashion these days and people were ran after it. According to Kim and Chung (2011) people use cosmetics for six main reasons. They wear makeup for "sexual attractiveness", "social and professional interaction success", "emotional pleasure" "better physical appearance", "self-perception" and "symmetrical face". In general, cosmetics are the products which improve or positively alter people's appearance, making them more attractive.

One of the most visible trends in cosmetic industry is natural and organic or natural products (Maria 2011). Growing concerns on environmentally friendly products, due to increased environmental issues (Lavan & Kennedy 2017). Environmental and health issues have been playing a vital role in the increase of the market share for organic and natural products. Organic and natural products are also often referred to as environmentally friendly products or green product (Kim & Chung 2011).

Research Problem

Cosmetic products were much more than make-up, cream and perfume. Every beauty treatment showed its effects on health either positive or negative. Almost all cosmetics were manufactured using chemicals that affect skin and health. According to U.S. researchers report that one in eight of the 82,000 ingredients used in personal care products are industrial chemicals, including carcinogens, pesticides, reproductive toxins, and hormone disruptors. Those things highly effect to skin, and to the environment. 80 per cent of entered products contained at least one of these toxic chemicals. These toxic chemicals cause to breast cancer, allergies & other diseases ('Dirty Dozen' cosmetic chemicals to avoid). health ministry and drug authority still failed to regulate these toxic ingredients in cosmetic products.

In Colombo district most of the people are go to job so they highly concern about their beauty and look to maintain that they use cosmetic product and they fail to consider about chemicals and side effects of those products. According to the media committee of Sri Lanka Medical Association symposium, Dr. Sriyani Samaraweera, Consultant Dermatologist of Lady Ridgeway Hospital and Dr. Indira Kahawita, Consultant Dermatologist of Base Hospital Homagama state that "usage of chemical cosmetics such as hair dye and Whitening creams, talks cause to itching, redness, eczematous rash of scalp or swelling, irreversible skin damage, cancer". And also they state that the practice of using 'prescription only'

medications for becoming fair is seen commonly in Sri Lanka, which must be avoided. And all these chemical product damages to DNA structure and disturb the protective mechanisms facilitating to develop cancers in the bone marrow, developing breast cancer, ovarian cancer. These products are contents several chemicals such as ammonia, hydrogen peroxide, p-phenylenediamine, diaminobenzene, toluene-2,5-diamine, Hydroquinone, topical corticosteroids and heavy metals such as mercury and lead which are not recommended to apply on facial skin. (Ceylon Today,2020)

Negombo Hettiarachchi V; MBBS (Ceylon) says that all these happened as a subject not as an object. Allergic, Assam and rash were generating caused by using cosmetics and several incidences occurred by using soap and cream that its brand cannot be declared. With skin problem patients 10 to 70 ages had visited him more than 100 per month. (Beauty and best news)

These details have shown clearly that also in Sri Lanka problems using beauty cosmetics were increased by day. Even though organic and natural products are available in Sri Lanka, the idea of green is still new to the residents of Sri Lanka. The market for environmentally friendly products in Sri Lanka is just starting to develop. In Sri Lanka still most consumers are not shift to organic and natural cosmetic and organic cosmetic industry also don't have that much of develop. According to nature secret report organic and natural cosmetics industry is not develop because of getting organic and natural standard cost is high so most of natural organic product not really known by customers. This issues are closely related to Consumer's Attitude, subjective norm, perceived behavioral control toward Purchase Intention.

Despite the importance for local research, many research studies which have been studying the beauty care industry are from foreign contexts (Hong et al., 2006, cited in Wanniarachige, L.D., & Sirisena A.B, (2019). In Sri Lanka there are very few studies that examine purchase intention of organic and natural cosmetics products. There are number of studies have mainly focused on organic foods. To fill this gap this study aims to enhance knowledge about organic and cosmetic products.

Problem statement: *“How does customer attitudes, subjective norm, perceived behavioral control influence on intention to purchase organic and natural cosmetic products?”*

The primary objective of this research is to evaluate influence of CA,PBC,SN,PE towards Purchase Intention of organic and natural cosmetics products in Colombo district based on the theory of planned behavior (TPB) by Ajzen (1985) Further, as the secondary objective, this study also focuses on identifying the level of CA, SN,PBC,PE and PI in relation to organic and natural cosmetic product in Colombo district.

Literature Review

Definitions of Organic and Natural Cosmetics Product

Natural cosmetics commonly defined as cosmetic things made of plants (Organic Trade Association, 2011). United States Department of Agriculture - USDA (2005) as cited in Natural Ingredient Resource Center defined natural products as products that are not made by synthetic process and not use chemical preservatives or synthetic ingredients and it is not necessarily has to be eco-friendly products.

Organic and Natural Cosmetic Industry in Sri Lanka

Sri Lanka has a rich heritage of herbal cosmetic and Ayurveda and natural treatments. There are several registered companies in the industry that produce natural and organic product but still not certified (Nature secret) The market of natural and organic cosmetic average annual

growth rate of 9.6%. While North America and Europe were the two biggest markets for natural and organic skin care, the growth in Asia Pacific is expected to be higher due to the rising of consumer income and change of lifestyle and the market of green personal care products is having a higher potential or opportunity to grow in Asian market as compared to the non-green personal care sector. (U.S. Department of Commerce, 2016).

In Sri Lanka More than 12 registered organic and natural cosmetics companies are there. For example Swadeshi Industrial Works PLC, Nature's Beauty Creation Ltd, Siddhalepa (Pvt) Ltd, Vendol Lanka Company (Pvt) Ltd, D S Silva & Son (Pvt) Ltd Janet Cosmetics (Pty) Australia, Lankem Ceylon PLC, Multichemi International Ltd, Virgin Coconut Industries (Pvt) Ltd, Oriflame Lanka (Pvt) Ltd, Kindai Kagaku Lanka (Pvt) Ltd, Lanka Herbals (Pvt) Ltd, (Silo tips, 2020)

National medicine regulatory authority (NMRA) is regulating cosmetics that are imported and manufactured in the country. It conducts regular raids and routine checks on smuggled and counterfeit cosmetics. All cosmetics whether they be lipsticks, skin lotions, shampoos, hair dyes etc. have to be registered with the authority. According to the Cosmetic, Devices and Drugs Act of 1980 those authorized to conduct raids and inspections are Provincial Directors of Health Services (PDHS), Regional Directors of Health (RDHS), Medical Officers of Health (MOH)'s and Food and Drug Inspectors (FDIs). Offenders can be imposed fines up to Rs.50, 000 or a six-month jail term in instances where the cosmetics were injurious to a person's health or if they have violated the act that stipulates the selling of unregistered cosmetics an offence. (NMRA, Ministry of health and nutrition and indigenous medicine)

Attitude

According to Ajzen (1985) attitude was an expression of favor or disfavor toward a person, place, thing, or event, object. So, it can be saying that attitude is a readiness of the mind to act or react in a certain way.

Theory of Planned Behavior

The Theory of Planned Behavior (TPB) (Ajzen 1985) is used widely to understand the key determinants of deliberate human behavior. The TPB is an enhanced model of the Theory of Reasoned Action, The TPB, predicts an individual's behavioral intention (BI) by three variables: attitude toward behavior (Att), subjective norm (SN), and perceived behavioral control (PBC). With the TRA, TPB added behavioral control (PBC) which only predicts behavior under people's volitional control (Bansal & Taylor, 2002). The TPB assumes that an individual's specific behavior is determined by his/her intention to perform the behavior.

Subjective Norm

Subjective norm represents a person's perceived social pressure to encouraging a potential perception toward undertaking the particular behavior (Ajzen & Fishbein, 1980). It can be interpreted as personal motivation to comply with the opportunities of people important to the individual (Taylor & Todd, 1995)

Perceived Behavioral Control

Perceived behavioral control refers to the degree of control that an individual perceives over performing the behavior (Chen, 2007). Thus, those who perceive a higher degree of personal control tend to have stronger behavioral intention to engage in a certain behavior (Ajzen, 1991).

Past Experience

research on green purchasing behavior, consumers' past experiences with green products may be "crucial in forming the product-specific perception that would lead to future purchase intention"; which means consumers' past experiences influence their purchases or use of green products (D'Souza et al, 2006). Researchers have argued that adding past experiences in the model enhances the prediction of behavior (Sutton & Hallett, 1989) Thus, consumers' past experiences with other organic products are also included in the TPB model in this study.

Purchase Intention of Customers

The Intention can be viewed as a key point for predicting consumers' purchasing intention as well as their subjective intentions (Keller K.L; 2001)

Conceptualization and Operationalization

Conceptual Framework

CA, SN, PBC, PE are considering as an independent variable to purchase intention for organic and natural cosmetics. The TPB is used as the framework to explain the backgrounds of intention to buy organic cosmetics products. CA, SN, PBC, PE are considering as an independent variable to purchase intention for organic and natural cosmetics.

Study of Chen, M. F. (2007) suggests that a positive attitude is significantly correlated with purchase intention. It may be assumed that:

H1: Consumer Attitude significantly influences on Purchase Intention for buying organic Cosmetic products of consumers.

Study of Kim, H. and Chung,J., (2011) reveals that moderating influence of perceived behavioral control on the organic personal care products and purchase intention for them. There for hypothesis two has proposed as follows:

H2: Consumers' perceived behavioral control significantly influences on Purchase Intention for buying organic Cosmetic products of consumers.

As per the finding of Kim, H. and Chung,J (2011), subjective norm is the second most important antecedent of purchase intention toward organic personal care products. And he states that previous research on green consumer behavior, which indicates a strong positive relationship between subjective norm and purchase intention (Bamberg, 2003; Kalafatis et al., 1999). Kim, 2009 state that subjective norm has a positive relationship with intention to buy organic personal care products. Therefore, it is assumed that subjective norm may strongly influence purchase intention for organic Cosmetics products. H3 is proposed as follows:

H3: Consumers' subjective norms significantly influences on Purchase Intention for buying organic Cosmetic products of consumers.

As per the finding of Saleem, B., & Recker, A. (2014), Past experience of Consumers' with organic personal care product was found to be an important predictor for purchase intentions. There for H4 has proposed as follows:

H4: Consumers' past experiences with other organic products significantly influences on Purchase Intention for buying organic Cosmetic products of consumers.

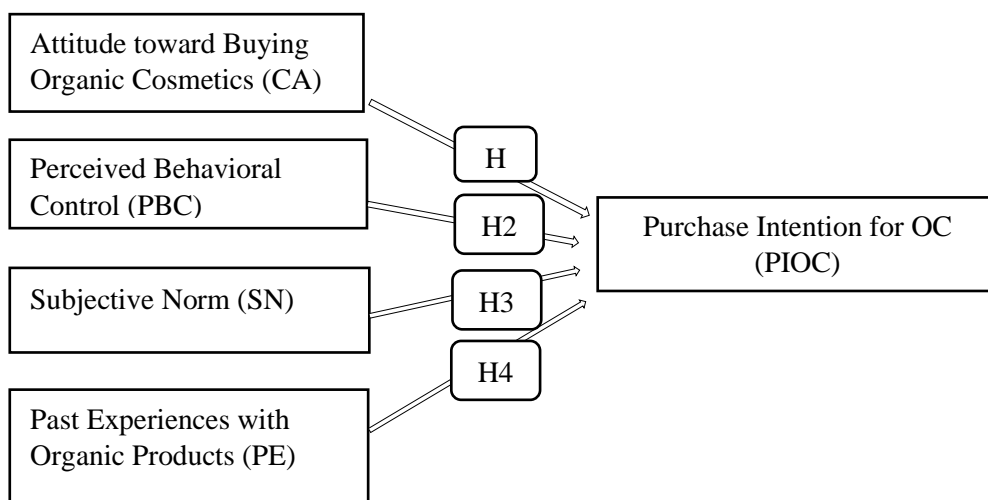


Figure 1: Conceptual Model

Source: Kim, 2009

Operationalization

Table 1: Operationalization

Consumer Attitude (CA)	Taylor and Todd (1995) Chen 2001(Cited by Francis Wong V.N,et al.,(2012) Jeanette Nikdavoodi (2012)	A1, A2, A3, A4 A5 A6
Perceived Behavioral Control (PBC)	Kim (2011)	PBC1, PBC2, PBC3
Subjective Norm (SN)	Kim (2011) Francis Wong V.N,et al.,(2012)	SN1, SN2, SN3, SN4, SN5, SN6
Past Experiences (PE)	Recker and Saleem (2014)	PE1, PE2, PE3, PE4
Purchase Intention (PI)	Kapogianni (2011) Francis Wong V.N,et al.,(2012)	PI1, PI2 PI3, PI4

Source: Develop by author

Methodology

Data and Sampling

The research type is deductive because it involved the development of a theory that was subjected to a rigorous test and variables are measured with quantitative analysis. Primary data are collected through structured questionnaires with closed statements measured with Likert's scale (1-5 as strongly disagree, disagree, marginal, agree and strongly agree, respectively), in the CDS Division in Colombo District in Sri Lanka. In the CDS Division, there are 35 Grama Niladhari Divisions and in which, the total number of population is 336,357, about two hundred (200) consumer consume cosmetic products for their personal consumption have been identified as sample of this study convenient sampling technique (see Table 2).

Table 2: Sampling Framework

Study (Population)	Setting	Consumers in Colombo District
Unit of Analysis		Customers in Colombo Divisional Secretariat Division
Sample Size		Two Hundred (200) Consumers
Sample Method		Convenient Sampling Technique

Source: Develop by author

Method of Data Analysis and Evaluation

Univariate Analysis

Univariate analysis is carried out for evaluating the attributes of dimensions and variables individually based on the response in the questionnaires. For this purpose, mean values and standard deviation of the dimensions and variables are taken into consideration. Therefore, this study evaluates individual characteristics of dimensions and variables.

Table 3: Decision Criteria for Univariate Analysis

Range for Decision Criteria	Decision Criteria	Decision Attribute
$X_i < -Z \sigma_x$	$X_i < 3$	Low Level
$-Z \sigma_x \leq X_i \leq Z \sigma_x$	$X_i = 3$	Moderate Level
$X_i > Z \sigma_x$	$X_i > 3$	High Level

Source: Develop by author

Bivariate Analysis

Bivariate analysis used to measure the magnitude and direction of the relationship between independent and dependent variables. Correlation can be categories based on possible ranges in relation to appropriate decision attributes in a corresponding way. Multiple liner regression analysis was used to test the hypothesis.

Results and Findings

Reliability Analysis

Questions of the study are classified of Attitudes (CA), subjective norm, perceived behavioral control, consumers' past experiences and Purchase Intention for Organic and Natural Cosmetic Products (PIOC) as the dependent variable. and intention. Hence, the Cronbach alpha was used to test the consistency of questions. According to reliability test done on questionnaire, the cronbach's alpha value on the whole questionnaire was 0.8 As this was higher than 0.7 in cronbach's alpha value statistically, the entire questionnaire was totally correct and reliable.

Table 4: Reliability analysis

Reliability Statistics

Cronbach's Alpha	N of Items
.814	23

Source: Survey Data

Level Contribution of Independent (CA, PBC, SN, PE) and Dependent Variables (PI)

In order to understand the level of contribution of CA, SN, PBC, PE, PI in organic and natural cosmetics used univariate analysis and measured mean and standard deviation. CA, SN, PBC, PE are independent variables, PI is the dependent variable.

Level of Independent Variable

Independent variables Consumer Attitude (CA), Perceive Behavioral Control (PBC), Subjective Norm (SN) and Past Experience (PE) are evaluated with indicators as follow six, three, six and four. All above independent variables shows high level attribute of the customers (Table 3). In addition, standard deviation is below 0.3, which reflects the size of the range of answers, is relatively low and shows a close convergence of opinions. With individual analysis, it is also noted that about all customers in this study have high level attribute for the CA, PBC, SN, PE.

Table 5: Overall Measures of Independent Variables

Description	CA (X ₁)	PBC (X ₂)	SN (X ₃)	PE (X ₄)
Mean	4.279	4.166	4.169	4.175
SD	0.193	0.224	0.227	0.306
Decision Attribute	High Level	High Level	High Level	High Level

Source: Survey Data

In regard with consumer attitude, this result indicates that the respondents have positive attitude toward organic and natural cosmetics. consumers in Colombo district had clearly a favorable attitude towards organic and natural cosmetics.

According to the result, Perceived Behavioral control measured through three indicators. it is clearly indicating that consumers have no any resource limitation and berries in purchase intention for organic and natural cosmetics in Colombo district.

SN has mean high level mean value 4.169. This result shows that, it is clear that Colombo district consumers are generally influenced by others' opinions, especially by opinion leaders, professionals and people that they trust.

According to the result on Past Experience (PE) result indicates that Colombo district consumer have high level of familiarity and knowledge about natural and organic cosmetics.

Level of Dependent Variable

Mean value of Purchase Intention is 4.24. It measured through four indicators. Based on all the indicators consumers have high level of contribution to Purchase Intention. standard deviation is 0.249, which reflects the size of the range of answers, is relatively low and shows a close convergence of opinions. consumers are likely to purchase organic cosmetics. Most of them stated that they intend to buy organic cosmetics in future. So, Colombo district consumers represent high purchase intention towards organic and natural cosmetics.

Influence of Independent Variables (CA, PBC, SN, PE) towards Dependent Variable PIOC

The study uses bivariate analysis to measure the objective four and five. Under this multiple linear regression were used to measure the influence of CA, PBC, SN, PE on PI toward buying organic and natural cosmetic product.

Table 6: Multiple Regression results of factors affecting to Purchase Intention

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.943	.218		-4.335	.000
CA	.591	.060	.458	9.878	.000
PBC	.211	.047	.189	4.443	.000
SN	.342	.053	.312	6.483	.000
PE	.083	.038	.102	2.175	.031
a. Dependent Variable: Purchase Intention					

Source: Survey data

According to the table 6 unstandardized constant statistic is -.943 it is shows that the model would predict if all of independent variables were zero. Multiple regression result indicates that the b value of Consumer Attitude (CA) is 0.591. its mean if purchase intention is increased by one-point CA is increased by 0.591. significant of t value is 0.000 it is less than 0.05. based on the evidence it is concluded that the CA is positively impact on Purchase intention of Organic and natural cosmetics. And Consumer Attitude is the best predictor of PIOC in this model.

b value of Perceived behavioral control (PBC) is 0.211. its mean if purchase intention is increased by one-point PBC is increased by 0.211. significant of t value is 0.000 it is less than 0.05. based on the evidence it is concluded that the PBC is positively impact on Purchase intention of Organic and natural cosmetics.

b value of Subjective norm (SN) is 0.342. its mean if purchase intention is increased by one-point SN is increased by 0.342. significant of t value is 0.000 it is less than 0.05. based on the

evidence it is concluded that the SN is positively impact on Purchase intention of organic and natural cosmetics.

b value of Past experience (PE) is 0.083. its mean if purchase intention is increased by one-point PE is increased by 0.083. significant of t value is 0.031 it is less than 0.05. based on the evidence it is concluded that the PE is positively impact on Purchase intention of organic and natural cosmetics.

The Summary Result of Hypotheses

Table 7: The summary result of hypotheses

Hypotheses	Results
H1: Consumer Attitude significantly influences on Purchase Intention for buying organic Cosmetic products of consumers.	Accepted
H2: Consumers' perceived behavioral control significantly influences on Purchase Intention for buying organic Cosmetic products of consumers.	Accepted
H3: Consumers' subjective norms significantly influences on Purchase Intention for buying organic Cosmetic products of consumers.	Accepted
H4: Consumers' past experiences with other organic products significantly influences on Purchase Intention for buying organic Cosmetic products of consumers.	Accepted

Source: Survey data

Model Summary Dependent Variable Purchase Intention

Table 8: Model Summary Dependent Variable Purchase Intention

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.870 ^a	.757	.752	.124195

a. Predictors: (Constant), PE, PBC, A, SN

Source: Survey data

Table 8 shows that the regression analysis R-Square (R²) in this study is 0.757, which suggests that the Independent variables (CA, PBC, SN, PE) explain 75.7% of the variance of the Purchase intention of organic and natural cosmetics. the Pearson's Correlation analysis explores that correlation coefficient (r) was 0.870 at the 1% level. Also Adjusted R- Square is 0.752 which implies that 75.2% of change in Purchase Intention is explained by independent variables (CA, PBC, SN, PE)

The Relationship between Independent Variable (CA, PBC, SN, PE) and Dependent Variable (PIOC)

The correlation analysis is initially carried out to explore the linear relationship of attitude, subjective norm, perceived behavioral control, past experience with purchase intention towards organic and natural cosmetics Product in Colombo District, if it exists. Results indicate that there is statistically linear significant and positive relationship between independent variables CA, PBC, SN, PE and PIOC (see Table 9).

Table 9: Correlation between Independent variable (CA, PBC, SN, PE) and dependent variable (PIOC)

Variable		PIOC
CA	Pearson Correlation	.774**
	Sig. (2-tailed)	0.000
PBC	Pearson Correlation	.595**
	Sig. (2-tailed)	0.000
SN	Pearson Correlation	.726**
	Sig. (2-tailed)	0.000
PE	Pearson Correlation	.626**
	Sig. (2-tailed)	0.000

** Correlation is significant at the 0.01 level (2-tailed)

Source: Survey Data

Discussion, Conclusion and Recommendation

Discussion

In order to understand the impact of attitude, subjective norm, and perceived behavioral control on purchase intention for Organic and Natural Cosmetic Product and to understand effect of consumers' past experiences on their purchase intentions for Organic and Natural Cosmetic Product to test the study hypothesis one, two, three, four used bivariate analyses and used by simple linear regression.

According to the result b value of Consumer attitude is .591. (Table 6). Which mean if purchase intention is increased by one-point CA is increased by .591 while others remain. significant of t value is 0.000 it is less than 0.05. based on the evidence it is concluded that the CA is positively impact on PI towards organic and natural cosmetics. So there is enough evidence to **accept** H4.

H1: Consumer Attitude significantly influences on Purchase Intention for buying organic Cosmetic products of consumers.

This result is same as previous research on consumer purchase behavior of green products, which reported the strong association between attitude and intention. (e.g., Kim, 2009; Kim and Chung (2011); Kapogianni, 2011; Alena & Bilal, 2014)

According to the result b value of Perceived Behavioral Control (PBC) is 0.211. (Table 6). its mean if Purchase Intention is increased by one point PBC is increased by 0.211 while others remain. significant of t value is 0.000 it is less than 0.05. based on the evidence it is concluded that the PBC is positively impact on PI towards organic and natural cosmetics. so there is enough evidence to **accept** Alternative Hypothesis.

H2: Consumers' perceived behavioral control significantly influences on Purchase Intention for buying organic Cosmetic products of consumers.

Many previous studies find that perceived behavioral control was positively related to purchase intention toward the products, (e.g., Kim, H. and Chung, J., (2011). This result slightly same as Kim, 2009 stated that, perceived behavioral control proved to be a less important antecedent to predict intention to buy organic personal care products than did past experiences.

According to the result b value of subjective norm is .342. (table 6). its mean if Purchase Intention is increased by one-point SN is increased by .342. While others remain. significant of t value is 0.000 it is less than 0.05. based on the evidence it is concluded that the SN is positively impact on PI towards Organic and natural cosmetics. so there is enough evidence to Accept Alternative Hypothesis.

H3: Consumers' subjective norms significantly influences on Purchase Intention for buying organic Cosmetic products of consumers.

And also, SN has High impact on purchase intention of organic and natural cosmetics then past experience and perceive behavioral control. This result is consistent with previous research on green consumer behavior, which indicates a strong positive relationship between subjective norm and purchase intention (Bamberg, 2003; Kalafatis et al., 1999). Kim found that SN is the second important predictor of PI towards organic and natural cosmetics this study also has result same as this.

According to the result b value of past experience is .083 (Table 6). its mean if Purchase Intention is increased by one point PE is increased by .083 while others remain. significant of t value is 0.038 it is less than 0.05. based on the evidence it is concluded that the past experience with organic product is positively impact on PI towards Organic and natural cosmetics. so there is enough evidence to accept Alternative Hypothesis.

H4: Consumers' past experiences with other organic products significantly influences on Purchase Intention for buying organic Cosmetic products of consumers.

And also, PE has lower impact on purchase intention of organic and natural cosmetics then other variables. These findings are in accordance with and support evidence from previous research such as Kim and Chung (2011) who show that past experience with organic cosmetics has a significant positive influence on consumers' purchase intentions of organic cosmetics. This result is same as D'Souza et al., 2006; Alena. R and Bilal S, 2014.

Conclusion

This study attempted to examine Colombo district consumers purchase intention of organic and natural cosmetics products based on the Theory of Planned Behavior.

Moreover, the results showed that all theory of planed behavior predictors and past experience are significantly correlated with purchase intention for organic cosmetics products. And Consumer Attitude (CA) is the best predictor of purchase intention towards organic and natural cosmetic product. So, it is concluded consumers with favorable positive attitudes toward organic cosmetics are more likely to purchase such products, it can be converted into buying habits. Subjective norm is the second-best predictor of PI towards organic and natural cosmetic products. it is concluded that if consumers believe that others think organic cosmetic products are good, then consumers will have more intention to buy these products. But subjective norm has less impact then consumer attitude on purchase intention towards organic and natural cosmetic products. So, it can be concluded that relatively people give more importance to them self-opinion then others opinions when they intent to buy organic and natural cosmetic products.

Perceived behavioral control has less impact on purchase intention and it is clearly show that Colombo district consumers don't have any resource limitations to buy organic and natural cosmetics product. Past experience is the least predictor of purchase intention towards organic and natural cosmetic products. It can be state organic knowledge and organic product familiarity not highly influence on purchase intention towards organic and natural cosmetic products. And the study found that male and female are equally interested about them beauty and appearance taking care of that. However, degree of interest is differing. females show higher degree of interest then male.

Recommendation and Contribution of the Study

This research provides use full information for organic cosmetics product retailers and manufacturers by indicating attitude is the most important determinant of purchase intention among the four predictors. The findings of this study suggest that creating a positive attitude toward buying organic cosmetics products may be a significant consideration for retailers to increase consumers' purchase intentions for the products. If retailers and marketers devise their marketing strategies based on the research suggestions, consumers may have organic cosmetic products in the market with more affordable prices.

In this economic situation, people might perceive organic products as being more expensive than alternatives. However, analysis also indicated that people considered 'value for the money' as an important product attribute when they purchase cosmetics products. This research suggests, then, that retailers might try to change consumers' perceptions of higher prices to affordable prices using marketing strategies (e.g., discount, advertisement, new product development) and thus it would make consumers believe that they would be capable to buy organic cosmetics products. Consequently, increasing consumers' perceived behavioral control over purchasing organic cosmetics products may possibly create a stronger relationship between their attitudes and purchase intentions toward the products.

The findings of this study suggest that organic cosmetics product retailers might attract potential consumers by issuing free samples and organic cosmetics product retailers might develop combined management activities called co-marketing with cosmetics shop owners and beauty parlors. Co-marketing strategies may result in an increase of potential consumers' awareness of organic cosmetics products.

Research supports to the theory of planed behavior as a useful predictive model. It presents the theory of planed behavior as a beneficial theory for organic and natural cosmetics purchase research. Overall, information of this study is able to suggest organic and natural cosmetic products marketers understand the utility of the attitude, subjective norm, perceived behavioral control, past experience toward the purchase intention.

Implication

Future research would also be valuable to explore the factors that influence consumers' attitudes and purchase intentions toward stores offering organic products. Future research might help organic product retailers understand how consumer values influence attitude toward the stores. With this theoretical frame work it is useful to include other independent variables which has impact on purchase intention. Such as consumer innovativeness. Future study can include all type of organic product. Such as organic food. Future studies can be use perceive behavioral control as a mediator between attitude and purchase intention towards organic cosmetics products.

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Impact of Cultural Values on Impulsive Buying Behavior in Fast Moving Consumer Goods in Sri Lanka – Concept Paper

Wijesekara, T.¹, Tennakoon, T. M. A. P.², Thisura W. A. P.³,
Hidellarachchi, K. A.⁴ and Jayasuriya, N. A.⁵

The cosmetic industry is one of the fastest growing and essential industries in the world as well as in Sri Lanka. Usage of chemical base cosmetics cause to environmental and health issues. Meanwhile there are number of organic and natural cosmetic products are available in Sri Lankan market which is not harmful for health and environment. This issue closely related on consumer behavior. Objective of study attempted to gain knowledge about influence of Consumer Attitude, subjective norm, perceived behavioral control towards Purchase Intention of organic and natural cosmetics. This research was an exploratory type research with a quantitative prospective and the population of the study consisted in above 15 years old consumers of Colombo District. To achieve the goals of this research, the data were collected from convenience sample of 200 consumers those who are lived in Colombo District. The respondents provided the data by means of a close-ended questionnaire. Multiple regression was used for testing the hypotheses. Data analysis was conducted using SPSS19 Software. This study empirically examines that Consumer Attitudes (CA), Subjective Norm (SN), Perceived Behavioral Control (PBC), Consumers' Past Experiences (PE) the independent variable and Purchase Intention for Organic and natural Cosmetic Products (PIOC) as the dependent variable. While all four the variables are significantly predicted purchase intention for organic and natural cosmetic products. And consumer attitude is the best predictor of PIOC. The results of this study also suggest that retailers can develop effective marketing strategies emphasizing ecological beauty, product safety, and affordable prices to increase consumers' intentions to buy organic and natural cosmetic products.

Keywords: *Organic and Natural Cosmetics, Purchase Intention (PI), Consumer Attitude (CA), Subjective Norm (SN), Perceived Behavioral Control (PBC)*

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¹ Faculty of Business, Sri Lanka Institute of Information Technology
(thilini187@gmail.com)

² Faculty of Business, Sri Lanka Institute of Information Technology
(1997tmptennakoon@gmail.com)

³ Faculty of Business, Sri Lanka Institute of Information Technology
(thisuramusic@gmail.com)

⁴ Faculty of Business, Sri Lanka Institute of Information Technology
(keshalaamandi1996@gmail.com)

⁵ Faculty of Business, Sri Lanka Institute of Information Technology (nisha.j@slit.lk)

Introduction

During the previous two decades, impulse buying has been expanded because of economic and social enhancements, for example, an increase in personal income and MasterCard choices. Because of the benefit of impulse buying, clients are affected by various elements that could be either identified with the shopping condition, customers' very own qualities, situational factors, or social variables. There have been previous researchers done but they have only studied on individualism, collectivism and power distance in a cultural level and they have failed to consider other areas and dimensions in the Sri Lankan context. The modern trade retail business world always tries to grab the attention of the customer to purchase their products and build up a good position in the market place. Furthermore, the

Manufacturers' also want to get a clear idea about the consumers' mind sets to produce their products. Especially in FMCG product range, the manufacturer has to know the consumer choice to spread their brands island wide. Most of the consumers seek the cultural aspects when they are using a product even. Some FMCG products can consume to both genders. But some FMCG products vary from the gender. As mentioned earlier, due to the profitability of impulse buying, researchers and practitioners have conducted many studies to understand the factors that encourage impulse buying (Lim & Yazdanifard, 2015).

Kongkaradecha and Khemarangsarn (2012) found out in their study that collectivism has a stronger relationship with impulse buying since word of mouth and willingness of consumers to buy items depend on other opinions that influence the consumers' decision to buy new products. According to Kacen and Lee (2002) argue that collectivists are better at controlling their impulse buying than individualists. And, according to Park and Choi (2013) despite the importance of Kacen and Lee (2002)'s findings, the study fails to consider other cultural differences, which may have affected the differences in impulse buying behavior.

Therefore, even though there have been previous researches done, their main focus was on individualism, collectivism and power distance in a cultural level and they have failed to consider other cultural differences, which may have affected the differences in impulse buying behavior especially focusing on FMCG (Fast Moving Convenient Goods) in the Sri Lankan context. Besides, Zhang, Winterich, and Mittal (2010) state that the focus of marketers has been only on the individualism/collectivism or power distance at the cultural level (Shoham, Gavish, & Segev, 2015).

A knowledge gap exists due to the lack of literature on impact of cultural values on impulse buying in the Sri Lankan context, focusing on FMCG. According to Hofstede's cultural dimensions' theory it is an outline for cross cultural communication and it demonstrates in what way these values relate to behavior and the effects of a society's culture on the values of its members, with the help of a structure derived from factor analysis. The available works done by researchers based on this topic has mainly focused on individualism, collectivism and power distance as the cultural values, therefore in this study all the cultural variables according to Hofstede's model will be taken into consideration. Besides, there are no researchers conducted on this topic in the Sri Lankan context.

Literature Review

Survey of past literature revealed that there is an impact of cultural value on impulse buying in FMCG. Through the past studies, the areas of the cultural values of impulse buying were found which contribute to the current research, which is to be conducted.

Theoretical Foundation

Hofstede's Cultural Dimensions Theory, created by Geert Hofstede, is a system used to comprehend the distinctions in culture across nations and to perceive the manners in which that business is done across various societies. As it were, the structure is utilized to recognize distinctive national societies, the components of culture, and evaluate their effect on a business setting. Hofstede's Cultural Dimensions Theory was made in 1980 by Dutch administration specialist, Geert Hofstede. The point of the examination was to decide the measurements wherein societies differ.

Every researcher is going along the model of Hofstede (1993) when they try to know the cultural values of customers. Following him, there are five dimensions of cultural values such as, individualism/collectivism, uncertainty avoid-ness, masculinity and femininity, power distance. He likewise clarified collectivism as network individuals or maybe groups which regularly care for the other individual and furthermore endeavor to help the individuals from the gatherings and independence as how free everybody is while settling on a choice and level of opportunity a part has been given by the individuals from the general public of which the person is a part.

Impulse Buying

Marketing and buyer researchers over a time of forty years have attempted to get a handle on the idea of motivation purchasing and characterized this phrasing in their own points of view, for which some exploration discoveries are examined here. According to Rook (1987) impulse buying for the most part happens, when a shopper feels a strong inspiration that transforms into a longing to buy an item immediately. Moreover, Beatty and Ferrell (1998) stated that motivation purchasing as immediate buy having no past point or target to buy the ware. According to Rook (1987) impulse buying happens when a buyer encounters an sudden, frequently strong and constant desire to purchase something right away. The impulse to purchase is hedonically complex and might encourage emotional conflict. Additionally, impulse buying is prone to happen with diminished regard for its results. As Piron (1991) defined, this complex phenomenon is not fully described by Rook (1987)'s definition, and he defined it as, impulse buying is a buy that is accidental, the result of an uncovering to a stimulus, and decided on the spot. After the buy, the buyer encounters emotional and cognitive responses.

Impulse buying is detailed as more stirring, less deliberate, more tempting buying behavior contrasted with planned buying behavior. Highly impulsive consumers are probably going to be unreflective in their thinking, to be emotionally pulled into the object, to desire immediate gratification. (Hoch, Stephen, Loewenstein, & George, 1991). These buyers do not pay huge attention to future negative consequences that could result because of their actions. In addition to that Stern (1962) exemplified that arranged purchasing conduct included a tedious data search followed by balanced dynamic. Unplanned purchasing, then again, involved all buys made without such arrangement ahead of time and incorporates drive purchasing. Henceforth, researchers recommend that the most significant distinctive factor among arranged and drive buys is the relative speed with which purchasing choices are made.

The buyer's mood and emotional state also affect impulse buying behavior (Rook & Gardner, 1993). Rook and Gardner (1993) discovered that positive moods of buyers are more conducive to impulse buying than their negative moods, however under both of these two moods impulse buying occurs. Beatty and Ferrell (1998) also found that positive moods of buyers are linked with the urge to buy impulsively. The author Rook (1987) showed that the

impulse buying process is activated by an unexpected, ground-breaking, and diligent inclination to purchase something right away. Mehrabian and Russell (1974)'s Exploration has demonstrated that the power and fluctuation of the desire, the recurrence of encountering it, and the weakness to this enthusiastic excitement shift among individuals on account of various components that add to perceptions of individual contrasts – one of the most critical being character attributes. Further, Ahmed (2011) stated that Impulse purchasing, for the most part characterized as a purchaser's spontaneous buy which is a significant piece of purchaser conduct with regard to FMCG.

Moreover, Bayley and Nancarrow (1998), stated that impulse purchasing is spontaneous, emerge from response to boost, includes psychological and passionate response, and "on spot chose". In addition to that Bayley and Nancarrow (1998) stated that impulse buying behavior is abrupt, convincing, not preplanned, gluttonously multifaceted conduct in which velocity of a motivation choice procedure blocks mindful and deliberate thought of elective data and decisions.

Types of Impulse Buying

Stern (1962) has stated different types of impulse purchases: pure, reminder, suggestion, and planned impulse buying.

Pure (unplanned) impulse buying: This occurs when a consumer understanding is truly impulse buying and it is the most easily noticeable. It is also a novelty or escape purchase that breaks the normal buying pattern.

Reminder impulse buying: This type of buying is occurred when the consumer is reminded of the need to buy an item upon seeing it. It is when the customer sees a product and it recalls him/her that the stock at home is low, or maybe remembers an advertisement or an article about the item that reminds the customer about the previous decision to buy.

Suggestive impulse buying: This is the type of impulse buying, even though the customer does not have any knowledge about the product due to the visualizers, a need for the product occurs after seeing it for the first time. The emphasized difference between the reminder impulse buying and suggestive impulse buying is that the shopper does not have any knowledge or experience of the item. Furthermore, suggestive impulse buying and pure impulse buying mainly differs as the shopper can buy the item on suggestion and it can be a rational and functional purchase in contrast to pure impulse buying.

Planned impulse buying: This type of impulse buying is when the shopper enters with an intention of planned products to purchase but can be distracted from the other products visible or through special prices, coupon offers, etc.

According to Stern (1962) all these concepts has led to a starting point as the contribution is significant during many studies including in-store and online impulse buying (Madhavaram & Laverie, 2004). Therefore, according Maymand and Ahmadinejad (2011) unplanned purchases are one of the most essential purchasing decisions to understanding the behavior, impulse buying and the customers; therefore, in this study pure (unplanned) impulse buying is focused on.

Factors Influencing Impulse Buying

Muruganantham and Bhakat (2013) states that the main factors that impulse buyers are influenced are mainly due to shoppers' personal traits, shopping environment, cultural factors or situational factors.

Internal Factors

According to Stern (1962), the products that are favorable for impulse buying are primarily concerned on detecting characteristics. The contribution to the literature with Rook and Hoch (1985) their research on impulse buying went more than products besides they observed at impulse buying through individual's perception. The impulsivity traits in people are emphasized by giving a new meaning to impulse buying of the research (Khanna & Karandikar, 2013) and the significance as a personality trait implies of treating impulsivity in the study of (Puri, 1996) as well. An individual difference variable considers impulse buying as a variable (Beatty & Ferrell, 1998) and the idea that individuals fluctuate on this variable provision the literature (Rook & Fisher, 1995). Beatty and Ferrell (1998) states that an individual's shopping enjoyment provides a positive feeling where it makes one's desire to purchase impulsively. Furthermore, studies imply that there's a higher tendency to involve in impulse buying which stimulates an individual to purchase impulsively and meanwhile perusing the store. Thereafter, Hoch and Loewenstein (1991) states that impulse purchasers urge to purchase more impulsively besides they are not as much of likely to assess their buying decision more than a typical informed shopper.

External Factors

Dawson and Kim (2009) states that rising exposure to certain stimuli upsurges the desire of impulse buying since the impulse buying behavior is stimulus determined. The external cues that can trigger impulse buying are atmospheric cues of retail environment that is smells, sights, sounds and marketing innovations such as credit cards, 24-hour retailing also including marketing mixed cues which are purchase display, promotions and advertisements can be accepted. Furthermore, past studies reveal that impulse buying can be increased via physical factors designed.

Moreover, dependent people or easterners tend to give more consideration towards the context and the difference in independent people also known as westerners are more context independent; therefore, the main reason why individuals from western cultures are less likely to extract and mix data about the context from reminiscences. According to Zhang and Seo (2015), the external cues and visual perception also shape the response of the cultural differences. Masuda and Nisbett (2001) suggests that the response to visual stimuli affect cultural aspects. These studies emphasize that the whole relationship within individual subjects and objects discloses that Asians reply to the world holistically whereas the main difference implies the attributes of the focal object when Westerners respond to stimuli methodically.

Situational Factors

Shapiro (1992) states that the retail location; season, shopping behaviors and the significance of the store atmosphere and the individual's mood are moderated through situational factors (Xu, 2007). According to Beatty and Ferrell (1998) the individual's impulse buying is affected by time convenience and purchasing power. Moreover, Schiffman and Kanuk (2010) impulse buying is triggered due to functional benefits of a merchandise. Jone (2013) also contends that product involvement and impulse buying tendencies is a result due to specific product impulse buying. Thereafter, Chang, Yan, and Eckman (2014) the situations such as money accessibility are moderated through the consumer's awareness and actions, and the situations faced during shopping where impulse buying could be related (Sharma, Sivakumaran, & Marshall, 2010). However, Chang, Yan, and Eckman (2014) suggests that emotional changes can be controlled positively or negatively with situational factors.

Cultural Factors

Cultural factors are prominently influencing the consumers' impulse buying (Kacen & Lee, 2002). Most importantly a better and clearer understanding about impulse buying where individualism and collectivism provides significant insights to consumer behavior (Kacen & Lee, 2002). According to Park and Choi (2013) there are other cultural factors except for individualism and collectivism, that could impact impulse buying. However, Mooij and Hofstede (2010) suggests that the personality of consumers is explained and the cultural values are a cohesive part of consumer's product assessment. Briley and Aaker (2006) argues that culture affects consumer's instant automatic responds yet culture's effects reduces when the consumers are deliberate, considerate and careful responses are required. Therefore, an important effect on impulse buying can be interpreted (Shoham, Gavish, & Segev, 2015) as it is an instant unexpected and unplanned buying (Beatty & Ferrell, 1998).

Cultural Dimensions

Hofstede states that consumers' responses, data, judgement and behavioral decisions could affect separate dimensions and cultural differences among these dimensions (Ng & Lee, 2015). According to Fischer (2009) culture has a shared meaning system. The dimensions are individualism/collectivism, masculinity/femininity, uncertainty avoidance, long term orientation and power distance (Hofstede, Hofstede, & Minkov, 1991) besides Ng and Lee (2015) suggests that importance in the way how culture shapes consumer behavior can be generated to help researchers in viewing culture and context these lenses. However, Hofstede's work consists criticism from other researchers and with many insufficiencies in the study (Soares, Farhangmehr, & Shoham, 2007). According to past researchers, these studies might be out of date, these dimensions were identified by Hofstede in 1963-73. Furthermore, Jenner, MacNab, Briley, Brislin, and Worthley (2008) suggests that there is an interconnection between the present global village and it's values where it's potentially dynamic than stable and culture is a most important aspect in global communication. Those researchers also highlight that the significant events and culturally linked variations such as immigration, economic crisis, technological improvement and terrorism could impact the cultural outlooks of the country. Hofstede G (2011) argues by responding to the criticism where there's no proof that these changes would wipe out many dimensions; to the divergent they might rise the comparisons as these values are the base for the dimensions and agree with the changes such as technological dimensions in separate ways, consequently he furthers emphasizes that there is no valid reason why these dimensions should not play a role till 2100. Moreover, De Mooji (2015) suggests that criticism of Hofstede's dimensions being outmoded in not considered because Sondergaard (1994) in his study illustrates that cultural values are stable over time. In Hofstede's study, the other criticism exposed is that the dimensions are not theoretically derived, but are empirically derived (Albers-Miller & Gelb, 1996) and they are built on an individual establishment (Lenartowicz & Roth, 2004). Furthermore, Schwartz (1994) evaluates that the dimensions are applicable to all cultures.

Despite from the criticisms and further diverse dimensions which have been formed, Hofstede's dimensions are used to contrast cultures, support hypothesis and also as a theoretical framework in order to compare cultures (Soares, Farhangmehr, & Shoham, 2007). According to Lu, Rose, and Blodgett (1999) for international marketing and consumer behavior the dimensions are measured with innovative tools with the importance of these cultural dimensions. Moreover, Sondergaard (1994) states in his study that Hofstede's argument is the most vital and prevalent theory of culture types for the cultures that has been complete, cited and simulated in social science and international marketing inclusive of cross-

cultural business studies as well. However, Magnusson, Wilson, Zdravkovic, Xin Zhou, and Westjohn (2008) and De Mooij (2015) argues that in comparison to Hofstede's dimensions, more recent cultural frameworks offers only a restricted understanding. Lynn and Gelb (1996) states that in other studies including Hofstede's dimensions capture cross-country differences and in order to understand culture, there are several other bases in the literature supportive for the use of dimensions.

Individualism/ Collectivism

According to Hofstede, Neuijen, Ohayv, and Sanders (1990) the separation, independence and the uniqueness of a person is mainly determined through an individualistic culture apart from a group of individuals. The individuals of the individualistic culture has an independent opinion of the self-image, hence they are motivated more with their own preferences, goals and objectives and emphasize a rational connection with people whereas not the individuals who are easily influenced by group opinions (Triandis, Culture and social behavior, 1994), but looking into collectivistic cultures due to the independent relationship within individuals and groups such as family, relatives, friends and via social platforms (Kacen & Lee, 2002). Members tend to be more influenced by the opinions and judgements from others as they are considered as an integral part of a group (Triandis, 1995). According to Schwartz and Bilsky (1990) the individual interests are associated with enjoyment, achievement and self-direction, and on the other hand collectivists interests are associated with prosocial, restrictive and security values with regard to their study. Ng and Lee (2015) argues that individuals can be mainly categorized in to two groups according to their self-construal, independents and interdependent. Self-construal defines as how individuals perceive themselves as a construct that deals. The characteristic which is linked with western cultures are those with independent self-construal highlight achievement and autonomy.

Yaveroglu and Donthu (2002) states that individualism and collectivism are associated with independency and interdependency whereas in an individualistic culture, there is an independent self-construal in individual's intention and in a collectivistic culture individual tend to possess an interdependent one with regard to FMCG (Markus & Kitayama, 1991). Furthermore, Yu and Bastin (2010) states that the theory of individualism and collectivism in an inevitable factor in order to get a deeper understanding about the consumer behaviour in fast moving consumer goods because of its effect on consumers' personality (Hofstede & McCrae, 2004). Collectivistic individuals are more influenced by others' opinions due to the interdependence and group pressure with relate to the buying behaviour. Aaker and Maheswaran (1997) argues that the primary purpose arises from the desire of group belongingness and sustaining the connection with closer individuals while individuals of individualistic cultures choose the uniqueness and self-identity reflection in their supermarket run behaviour (Kacen & Lee, 2002).

Even though individualism and collectivism provide an essential insight and integrative strength regarding culture, the understanding of consumer behaviour in FMCG could be further illuminated in this dimension to be enhanced (Ng & Lee, 2015). Triandis and Gelfand (1998) states two distinctions in order to provide an inclusive understanding about this dimension, which are vertical (highlighting the equality within individuals in the society) and horizontal (concerning on hierarchy in the society) for both individualistic and collectivistic cultures. In vertical individualistic societies, the individual achievements and status are ambitious within people, which makes them rise above from others through competition. According to researchers, on the other hand, individuals of horizontal individualistic cultures tend to prioritize and value themselves to be equal as others in showing one's uniqueness

(Triandis, 1995). Moreover, Triandis (1995) argues that regarding vertical collectivistic cultures, to accomplish group success in competition with other groups, it is important for individuals to sacrifice their individual goals. On the other hand, horizontal collectivistic cultures mainly focus on the sociability and interdependence within the society, which places towards human equality instead of material success (Maheswaran & Shavitt, 2000).

The difference between individualism and collectivism is vital to cross-cultural comprehension of consumer behaviour (Maheswaran & Shavitt, 2000). The study of Kacen and Lee (2002) stresses that Individualism/collectivism as an important factor that influences impulse buying behaviour in fast moving consumer goods. Their study emphasizes that people who are in collectivist cultures are less involved in impulse buying than individuals who are in individualistic cultures. It's because consumers in individualistic cultures willing to make purchase decisions more self-reliantly than consumers in collectivist cultures (Roth, 1995). People who are in collectivist cultures highly consider opinions of others and group preferences more than their own needs (Kagitcibasi, 1997).

Power Distance

Power distance is another cultural value that affects impulse buying behaviour. Chen, Ng, and Rao (2005) stated that people who are living in cultures that have a low score on power distance tend to give more focus towards the present value rather than future value. They desire instant satisfaction rather than delayed satisfaction. It affects customer's willingness to buy items more impulsively in cultures that have low power distance. Zhang, Winterich, and Mittal (2010) also stated that people who are in low power distance cultures have lesser self-control and power distance can be considered as a factor that motivates impulse buying of consumers. Zhang, Winterich, and Mittal (2010) suggested that in cultures that have an extraordinary score on power distance the relationship between self-control and power distance has the possibility of being stronger. Muraven, Baumeister, and Tice (1999) also stated that people with more self-control are individuals who are living in cultures with high power distance. Peacock (2004) declared that self-control is usually practiced by people and controlling impulse buying behaviour can be identified as one of the most necessary society standards. However, Lalwani, Shavitt, and Johnson (2006) implies that individuals in low power distance cultures have a tendency to show few socially desirable responses as it is not necessary to respect or show high self-control. Yaveroglu and Donthu (2002) explains that the influential group with greater power are followed by individuals in high power distance cultures, which will eventually delay them to try something original. According to Bathaee (2014) the propensity in delaying purchasing decisions could be clearly proved with the power distance level of individuals.

Thus, with the state of Albers-Miller and Gelb (1996) more products are acquired by more individuals in high power distance cultures and the persons in these cultures could show their conspicuous consumption via power, wealth and elitism, whereas it will help them to be pleased and feel influential.

Uncertainty Avoidance

Hofstede, Neuijen, Ohayv, and Sanders (1990) states that uncertainty avoidance index (UAI) evaluates the customer's sensitivity of uncertainty and discomfort. People in weak UAI have a calm perception regarding their life and work pressure and they are flexible and more eager to take risks (Hofstede, Hofstede, & Minkov, 1991). In regard to uncertainty avoidance, Kacen and Lee (2002) states that since individuals do not pay attention on the negative consequence of their buying pattern, the people in individualistic cultures tend to purchase products

impulsively yet with more focus given on their needs and wants. Moreover, Triandis (1995) reports that individuals' apprehensions the negative possibility of collectivistic cultures that would happen after the purchase and therefore the decisions made are hesitated.

The consumer behaviour and the way they react in different situations are affected in different levels of uncertainty avoidance (Jung & Kau, 2004). According to Spears (2006) the regret theory in her studies compares the actual outcomes and the outcome which would have been if another alternative had been chosen among individuals. Furthermore, the same researcher states that the purchase could be made safer for the consumers to anticipate and minimize regret by taking steps besides, to eliminate uncertainty or risk as possible by collecting data and extending research in order to assume that people try to make the best buying decision via a master plan. However, Jung & Kau (2004) states that in order to minimize risks people in high uncertainty avoidance cultures tend to collect more data. Thereafter Donthu and Yoo (1998) argues that there would be more hesitation in high uncertainty avoidance culture; hence majority of the customers desire to minimize the risk and plan more in order to avoid regretting. At the same time, to embrace risk more and accept uncertainty, consumers in low uncertainty avoidance cultures have a tendency to. People in low uncertainty avoidance cultures gets more curiosity and feels free for changes and innovation more than the people in high uncertainty avoidance cultures (De Mooij & Hofstede, 2010).

Masculinity/ Femininity

Concerning about the masculinity/femininity (Hofstede & Hofstede, 2001) note that in high masculinity cultures, the father deal with the facts and the mother with feelings; however, in low masculinity cultures (feminine), both mother and father can deal with the facts and feelings. Chang (2006) suggests that people in high masculine cultures favor facts and information more than people in feminine cultures. Therefore, Shoham, Gavish, and Segev (2015) suggest that in high masculinity cultures, rational behavior should dominate, in contrast to emotional behavior such as impulse buying.

Christiansen, Yildiz, and Yildiz (2014) argue that masculinity is concerned with wealth, competition and materialism; therefore, consumers from these cultures can be easily persuaded to purchase more to compete with others in the community. On the other hand, according to earl Phuket women spend money like conservative trustees who are in charge of someone else's money. It was also stated that one of the harshest rumors of the current times are that women are impulsive buyers with a fixated obligation to spend their household money on anything that catch their fancy. This comment gives an understanding that women buy impulsively even though most of the purchases made are not planned in advance. In a study conducted in super markets by Nesbit Associates who is a package designer out of 308 shoppers 112 have stated that the ideas for their dinner or supper along with the ingredients are formed once inside the supermarket. Ahmed (2011) findings have mentioned that a significant relationship cannot be found I the gender of the customers and the frequency of their shopping. Banerjee and Saha (2012) have shown similar findings.

Long-term Orientation

Hofstede G (1980) have guided in the long-term orientation (LTO Bond 2002), Hofstede originally refereed to this term as "Confucian dynamic" (Hofstede & Bond, 1988) and was referred to as LTO later. Initially LTO was hypothesized as a forward seeing trait against a present and past seeing trait. Which means it is a long term (future) and short term(now). Factors such as respect for tradition is a factor which goes parallel with the short term (now) and persistence is a long-term attribute. However, there has been confusions with regard to

the constructs. Hofstede G (2001) himself stopped the use Long term orientation and Confucian dynamism as substitutes and changed it to Long term orientation as the fifth cultural dimension in the Hofstede's cultural dimension (Fang, 2003) therefore LTO focuses on here and now when compared to future and past. Individuals who has a high score in LTO are those who value tradition, effort, works hard for gaining benefits in the future, and perseverance.

Long-term orientation explains the way a society strategically gets ready for the future (Hofstede, Neuijen, Ohayv, & Sanders, 1990). According to Hofstede, Neuijen, Ohayv, and Sanders (1990) people who are living in cultures that have a low score on this dimension tend to live with traditional norms and regulations while suspecting new changes and innovations. However, people in cultures that have a high score on this dimension prefer to accept challenges (Hofstede, Neuijen, Ohayv, & Sanders, 1990).

The Impact of Individualism/ Collectivism on Impulse Buying

Along with the expanded globalization measure, culture is finished up to fundamentally impact customer behavior, particularly impulse buying behavior (Maheswaran & Shavitt, 2000). The investigation of Kacen and Lee (2002) underscores the hypothesis of independence and cooperation as basic factors that influence purchasers' impulse purchasing conduct. In particular, it presumes that individuals in collectivistic societies will in general be less occupied with motivation purchasing than individuals in individualistic societies since clients in individualistic societies will in general settle on purchasing choices more freely and self-centered than in collectivistic societies (Roth, 1995). As it were, they are less reliant on others' assessments and allowed to settle on choices because of the way that individuals in these societies organize their own objectives and inner boosts to amass wants (Kagitcibasi, 1997). As per a similar analyst, individuals in collectivistic societies will in general emphatically consider different assessments and gathering inclinations before their own needs. Conversely, shoppers in maverick social orders don't control self-satisfaction as much as purchasers do in a collectivist society (Millan, De Pelsmacker, & Wright, 2013). These motivations somewhat limitation customers in collectivist societies to encounter buying items immediately and subsequently bring about a lower probability of drive purchasing conduct and more slow dynamic (Nguyen, Jung, Lantz, & Loeb, 2003). Nonetheless, some different investigations offer a counter view that community has a more grounded relationship with drive purchasing conduct since what others think and the readiness of shoppers to purchase things could be affected by others' sentiments (Kongarakadecha & Khemarangsarn, 2012). Consequently, the creators propose:

H 1 – There is a significant relationship between individualism/collectivism and impulse buying behavior

The Impact of Power Distance on Impulse Buying

Power distance is another social measurement found to have an impact on impulsive purchasing conduct. As per Chen, Ng, and Rao (2005) societies with a low score on PDI (power separation file) (Western societies) center more on the current incentive than the future; they incline toward prompt delight as opposed to it being deferred or limited. Accordingly, it influences individuals' ability to buy items rashly in low power distance societies. In a similar vein, Zhang, Winterich, and Mittal (2010) infer that individuals in low 22 power distance societies are related with less self-control, and power distance is viewed as an indicator of buyers' impulse purchasing conduct. In addition, Lalwani, Shavitt, and Johnson (2006) find in their examination that individuals in low power distance societies tend to show

less socially alluring reaction propensities since they feel that there is no compelling reason to obey or show high restraint. Nonetheless, Zhang, Winterich, and Mittal (2010) recommend that the connection between power distance and self-control could be more grounded in high power distance societies. Reliable with their view, Muraven, Baumeister, and Tice (1999) additionally note that individuals in high-power distance societies are related with more discretion. Moreover, Peacock (2004) additionally expresses that in nations that have an amazingly high power distance, individuals regularly practice restraint and controlling impulse purchasing conduct is one of the most alluring cultural standards. Subsequently, Zhang, Winterich, and Mittal (2010) propose that powerful distance influences and diminishes impulse purchasing through the affiliation of restriction relying upon power distance, and their examination results show that individuals in higher power distance societies can actuate their self-control quicker in contrast with those in low power distance. In lined up with Zhang, Winterich, and Mittal (2010) Yaveroglu and Donthu (2002) propose that individuals in higher power distance societies are bound to follow the choices of the more compelling gathering with more noteworthy force, which can frustrate them to take a stab at something new. Likewise, the inclination to postpone purchasing choices is end up being identified with clients' capacity separation levels (Bathae, 2014). Then again, as per Albers-Miller and Gelb (1996) buyers in high influence separation societies attempt to secure more items and individuals in these societies accept that they could flaunt their influence, riches and elitism through prominent utilization and this utilization can assist them with being fulfilled and feel powerful (Albers-Miller & Gelb, 1996). Subsequently it is theorized as follows:

H 2 - There is a significant relationship between power distance and impulse buying behavior.

The Impact of Uncertainty/ Avoidance on Impulse Buying.

Comparable to uncertainty avoidance, Kacen and Lee (2002) reports that individuals in individualistic societies are all the more ready to purchase things rashly on the grounds that they don't focus a lot on the negative outcome of their buying, but instead center around their wants and needs. In any case, individuals from collectivistic societies are more worried about the negative chance that could occur after their buying, and thus being dithered to decide (Triandis, 1995). This finding is lined up with 23 the investigation of Hofstede, Hofstede, and Minkov (1991) and as per the scientists, there is a connection between's uncertainty avoidance and individualism/collectivism that individuals in individualistic social orders are bound to acknowledge vulnerability and dangers while collectivistic individuals will in general stay away from vulnerability and approach them with delay. As such, the individuals in low vulnerability shirking societies will in general grasp the hazard and acknowledge vulnerability (Donthu & Yoo, 1998) which means individuals in this culture will in general accomplish more motivation purchasing since drive purchasing is related with hazard taking and oddity (Sharma, Sivakumaran, & Marshall, 2010). On the opposite side Hofstede and Hofstede (2001) recommend that individuals in high uncertainty avoidance societies fear disappointment and danger and Bao, Zhou, and Su (2003) demonstrate that hazard unwilling buyers may want to look for more data so as to diminish the uncertainty related with the buy, accordingly it is theorized

H 3 - There is a significant relationship between uncertainty/avoidance and impulse buying behavior

The Impact of Masculinity/ Femininity on Impulse Buying

As to masculinity and femininity, Hofstede and Hofstede (2001) note that in high masculinity societies, the dad manage the realities and the mother with emotions; nonetheless, in low

masculinity societies (female), both mother and father can manage the realities and sentiments. Chang (2006) proposes that individuals in high manly societies favor realities and data more than individuals in ladylike societies. Hence, Shoham, Gavish, and Segev (2015) propose that in high masculinity societies, rational conduct ought to command, rather than passionate conduct, for example, motivation purchasing. As per the specialists, there could be a negative connection among masculinity and motivation purchasing. On the opposite side, Christiansen, Yildiz, and Yildiz (2014) contend that masculinity is worried about riches, rivalry and realism; thusly, shoppers from these societies can be effectively convinced to buy more to rival others in the network. Subsequently the creators hypothesize:

H 4 - There is a significant relationship between masculinity/femininity and impulse buying behavior

The Impact of Long-term orientation on Impulse Buying

In regard to long term orientation, Hofstede (2011) showed that Long Term Orientation alludes to long term versus short term orientation towards what's to come. The long-term pole compares to the estimations of determination, frugality, requesting connections by status, and having a feeling of disgrace; while, values at the momentary shaft were responding social commitments, regard for convention, ensuring one's "face", and individual consistent quality and security.

H5- There is a significant relationship between long term orientation and impulse buying.

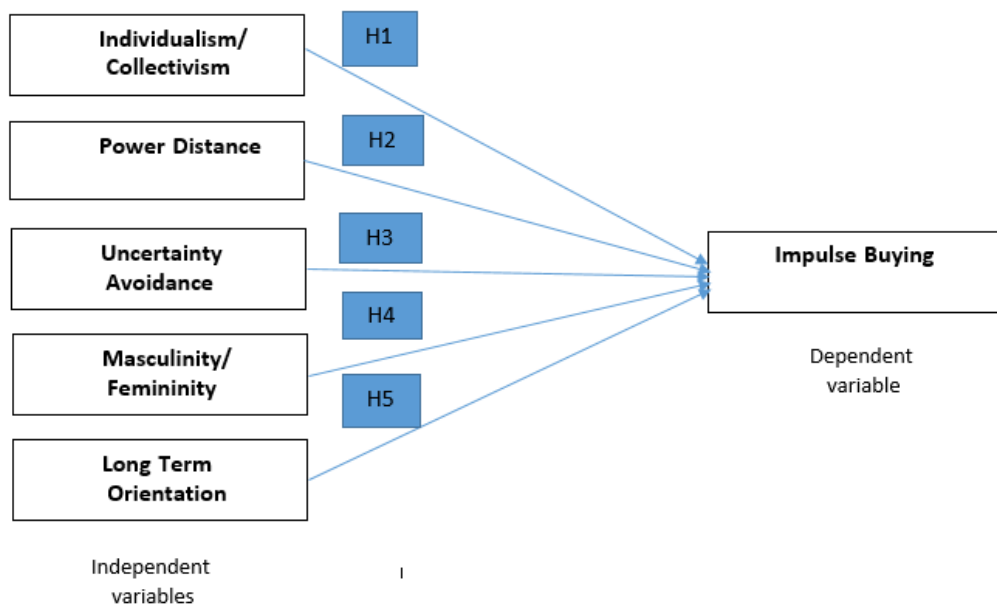


Figure 1: Conceptual Framework

Source: Authors Creation

According to the conceptual framework developed, collectivism, individualism, power distance, long term orientation, uncertainty avoidance and masculinity is having a significant impact on impulse buying in FMCG.

Significance of the Study

This exploration will add to finding the impact of cultural value on impulse buying in Fast Moving Consumer Goods in Sri Lankan context. Since we consider further cultural values which were not considered by previous researchers in Sri Lankan context such as masculinity/femininity, uncertainty avoidance and long-term orientation besides power distance, individualism and collectivism this study will be helpful for college undergraduates who are specializing in marketing management to conduct their future researches in Sri Lankan context. And also, those who are working in the FMCG industry will also be able to get the advantage of this study to understand the buying impulsiveness of their FMCG products on different cultural values.

During the past two decades impulse buying has increased due to increases in income of consumers and availability of credit card options. But these increases in impulse buying vary on different cultural values. Consequently, it is hard for marketers to comprehend which products should be promoted in which cultures to influence customers to buy them impulsively. But referring this study they will be able to get a clear comprehension about which products should be promoted in which cultures in Sri Lankan context. Therefore, this exploration will also be important for Sri Lankan marketers to enhance their knowledge towards impulse buying to do their marketing campaigns in a proper manner. It will be important for both local and foreign retailers to understand the appropriate marketing strategies for Sri Lankan consumers. Retailers can obtain the benefit of promoting impulse purchasing through individual cultural based marketing strategies.

In Sri Lanka retail industry is growing very fast with increased number of retail stores. But some of the retailers seem not to be successful in this industry. Since impulse buying has been increasing very fast, one of the major success factors of retail industry is understanding the impulse buying of products in the retail stores and understanding how to stimulate more customers to buy products impulsively. Therefore, this study will be very significant for both those who are not successful in the retail industry to survive in the industry and other businessmen who are successful in the industry to increase their profitability and sales by enhancing their knowledge towards impulse buying.

Finally, significance of our study is more towards the college students who are specializing in marketing management and people who are working in FMCG industry, marketers and retailers.

Conclusion

Even in this age of globalization, the influence of cultural values is intact. Which is why marketers providing emphasis on cultural factors when marketing to different customers with dissimilar orientations and different cultural values. Culture affects people's values; their behavior and what consumers tend to think what is acceptable and what is not. Therefore, it could be assumed that cultural values are likely to have an impact on how individuals understand, how they think and also what they purchase. Impulse buying of goods too come under this category of purchase. With the increase of impulse purchases in the world, it is important for the local retailers, foreign businesses that aim to sell their goods to the local

customers and also marketers to understand how enhance their knowledge and to stimulate the customers towards impulse buying specially by looking into the cultural values of the Sri Lankan consumers. Therefore, this study seeks to understand the impact of cultural values on impulse buying with concern to Fast Moving Consumer Goods in the Sri Lankan context. The available literature has given prominence to individualism/collectivism and power distance in and haven't addressed the research gap of studying further factors that influences a customers' impulse buying in a cultural level specifying on FMCG, therefore this study focuses addressing the mentioned gap and contributing to the existing literature as a study done in the Sri Lankan context.

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Framework for Measuring Sustainability Performance of Logistics Service Providers- A Systematic Review of Literature

Prabodhika, A. P. K. J.¹, Niwunhella, D. H. H.² and Wijayanayake, A.³

Sustainability and sustainable development have become a buzzing topic in today's business world. Business organizations are more inclined towards making themselves economically, socially, and environmentally more sustainable. With the introduction of concepts like “Sustainable Supply Chain Management” organizations have determined to not only make themselves sustainable but to make the whole supply chain sustainable as well. As part of the supply chain, Logistics Service Providers (LSPs) are no exception. With the pressure from the internal and external stakeholders such as Government, Non-Government Organizations (NGOs), public authorities, LSPs are more inclined towards making themselves more sustainable and ‘being sustainable’ has become a competitive advantage for them now. To measure and evaluate the sustainability performance, various frameworks and standards have been introduced. This paper reviews the available literature from 2010 to 2019 under logistics service providers, sustainability, and sustainability performance evaluation. This study was conducted through a systematic review of the literature and presents various sustainability indicators used by researchers, sustainability performance evaluation models, and frameworks and the approaches used by researchers in developing those models and frameworks for the logistics service providers and the supply chain as a whole. The review brings up the importance of further analyzing and testing those proposed models and frameworks using case studies and the need for incorporating opinions of stakeholders when developing the models for the evaluation of sustainability performance and frameworks.

Keywords: *Logistics Service Providers (LSPs), Sustainability, Sustainability Indicators, Sustainability performance evaluation*

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¹ Department of Industrial Management, University of Kelaniya, Sri Lanka
(jjpinadari21@gmail.com)

² Department of Industrial Management, University of Kelaniya, Sri Lanka (hirunin@kln.ac.lk)

³ Department of Industrial Management, University of Kelaniya, Sri Lanka (anni@kln.ac.lk)

01. Introduction

1.1 Sustainability and Sustainable Supply Chain Management (SSCM)

Sustainability and sustainable development have become buzzing topics in today's world. Unlike a few decades back, the awareness and the interest in sustainability and sustainable development have been increased among the corporate world, academia, and public as well. Sustainable development is defined in the Brundtland Report of the World Commission on Environment and Development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Visser & Brundtland, 2013).

The organizations and their supply chain partners are pressured for sustainable practices from both internal and external stakeholders such as Government, Non-Government Organizations (NGOs) and public authorities (Varsei, 2014). Unlike the early days, organizations are required not only to perform their best in the economic perspective but also with relation to the environmental and social aspects as well. Consequently, contemporary organizations are more inclined towards adopting a more sustainable business model comprising the three interdependent and interrelated components or dimensions in their operations: society, the environment, and the economy (Azevedo et al., 2017). The 3 dimensions mentioned above, are also in line with the concept of the Triple Bottom Line (TBL); people, planet, and profit.

Sustainability in today's perspective is not limited to the focal company but an aspect which should be also spread across to the whole supply chain. With that, Sustainable Supply Chain Management (SSCM) has emerged in which supply chain management is incorporated with the goals of sustainability. (Azevedo et al., 2017).

If supply chain partners are aligned with the focal company's goals, then sustainable development might be achieved more efficiently through the establishment and promulgating of the ethos and code of conduct in sustainable operations and focal company from time to time, would need to review their strategies, practices and activities related to the supply chain as well as continued monitoring of the supply chain (Varsei et al., 2014).

1.2 Logistics Service Providers (LSPs)

'Logistics Service Providers' can be defined as an external provider who manages, controls, and delivers logistics activities on behalf of an organization and they have become important partners in the modern-day supply chain. Their services vary from distribution, transportation, warehousing, freight forwarding to consultation, and value-added services (VAS). Ali et al. (2019) state that the logistics service providers can also be known as "Contract logistics", "Third-Party Logistics", "Logistics Outsourcing" and "Logistics Alliances" and highlights the importance of conducting sustainability studies on logistics service providers in various industries and countries. Being part of the supply chain logistics, service providers are automatically bound to incorporate sustainability practices into their business.

Today many organizations tend to outsource their key elements of supply chain functionalities like warehousing, distribution, packaging etc. which result in vertical disintegration. That has radically changed the role of the logistics service providers (Sweeney et al. 2013). The manufacturers and retailers expect to select logistics service providers based on their sustainability practices and performance. With that, logistics service providers are required to improve their sustainability competencies to gain a competitive advantage.

1.3 Sustainability Performance Measurement

To improve their competitive advantage, organizations must measure and evaluate their supply chain sustainability effectively and efficiently. Through measuring and evaluating sustainability

performance, organizations can identify the gaps and areas to be improved for further development. Many research studies have proposed metrics and frameworks to measure sustainable supply chain performance.

The selected sustainability indicators of the organization must be measurable and verifiable and should assist in enhancing the benchmarking and monitoring over time as organizations tend to revise the sustainable practices from time to time and it should also be easily understandable by the industry professionals. The proposing frameworks should be transparent enough so that the organization cannot hide their operations' true impact on the TBL. When selecting the sustainability indicators, measures and determining their weights the involvement of the stakeholders such as employees, customers, suppliers etc. is important (Azevedo et al., 2017).

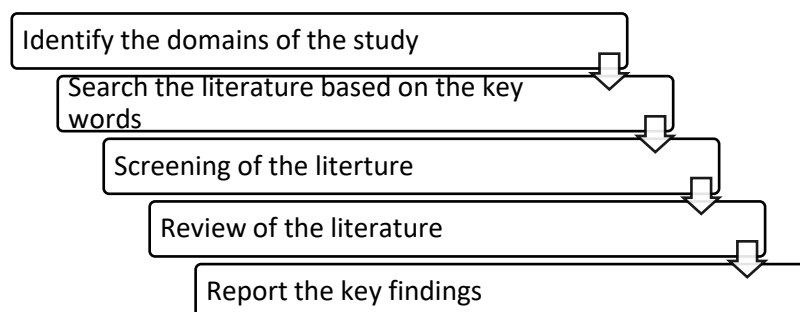
02. Methodology

The systematic review of the literature was based on the content analysis of the main domain areas of logistics service providers, sustainability and logistics service providers and sustainability performance management and evaluation. Then the literature available under the above-mentioned areas was searched and gathered using keywords. Only articles published after 2010 were considered. Then the articles which dealt with sustainability performance evaluation and measurement frameworks, were reviewed. The proposed frameworks were reviewed based on their approaches that were used in developing those frameworks and they were also based on the sustainability criteria that they have considered.

Figure 1: Process of Literature review

03. Literature Review

3.1 Logistics Service Providers



Organizations outsource logistics services mainly for two reasons. To reduce cost and to transfer the risk so that they can focus more on their core competencies. The role of logistics service providers has changed over time from simply providing transportation services to a broad range of activities including warehousing, inventory management, freight forwarding, cross-docking, technology management, value-added services, consulting services etc. One factor that has helped these changes is the advancement of information technology. Information technologies automate some elements of the logistics functions like order processing, consignment tracing etc. and links the members of the supply chain, making the collaborations feasible. Supply chains often lack a dominant company that should serve as a leader. But the partners of such supply chains also need to be exposed to supply chain management best practices, information sharing methods, and the latest technologies. Zacharia et al. (2011) suggest that logistics service providers are the ones who have been taking the leading

role, serving as an “Orchestrator” within the supply chain by introducing the best supply chain management practices. Furthermore, contemporary logistics service providers are best in providing their clients the following benefits including utilization of resources, expertise, flexibility and scalability, continuous improvement, use of technology, security, customer satisfaction and quality (Evans 2014)

Ali et al. (2019) highlight the importance of conducting sustainability studies on logistics service providers in various industries and countries. The findings of the survey data analysis carried out by Ali et al. (2019) states that sustainability indicators of the logistics functions of logistics service providers influence environmental performance. Results also show that social performance improves logistics’ efficiency and the company’s competitiveness.

3.2 Sustainability and Logistics Service Providers

The economic dimension of sustainability is the aspect that is often evaluated in an organization. Studies that focus on measuring the performance of supply chains or logistics service providers traditionally have focused on economic aspects of it with cost minimization (profit maximization) and service level maximization (Varsei et al., 2014). Chardine-Baumann & Botta-Genoulaz (2014) in their framework, covers the economic performance evaluation in five fields: reliability, responsiveness, flexibility, finance, and quality. These five fields are further categorized into subfields with an extensive review of the literature. Further, this study highlights that the ‘finance’ field was the field that was analyzed often.

From a business perspective, the environmental dimension of the sustainability concept involves minimizing the environmental impact caused by an organization. In the logistics sector, environmental concern has become a buzz topic due to many factors. Logistics and transport activities are the 2nd biggest contributor to GHSs (Greenhouse Gases) after electricity production. Due to the increase of demand for logistics services, the above mentioned contribution will increase in the future and global warming have urged for more environmentally sustainable logistics services (Evangelista et al., 2018).

Zhang et al. (2019) using an extensive review of the literature identified that Triple Bottom Line (TBL) and Global Reporting Initiatives (GRI) applications are the two main frameworks in measuring logistics environmental sustainability. They propose a set of environmental indicators for city logistics using the GRI framework as an evaluation basis. The proposed set of indicators falls under five categories: energy, transport infrastructure, noise, congestion and emissions, effluents, and waste

Social sustainability of logistics service providers, means to operate its services considering their impact on internal and external stakeholders (i.e. society and employees) in terms of welfare, safety, and wellness. Chardine-Baumann & Botta-Genoulaz (2014) includes the social dimension of sustainability to its analytical assessment model with five (5) five social fields/categories: work conditions, human rights, social commitment, customer issues, best practices. Further, the research categorizes the five fields into subfields/categories as well.

The proposed composite index by Azevedo et al. (2017) also includes a social dimension. The social performance measures that have been taken are corruption risk and sourcing from local suppliers. Under corruption risk, the proposed indicators will be transparency practices by suppliers such as bribes. Sourcing from local suppliers is measured by two indicators namely of the percentage of procurement budget used for purchasing from local suppliers and indications of child labor and conformant to constant abolition of child labor.

By using an extensive literature review Jung (2017) selected the most frequently adopted sustainability criteria with the help of industry experts. The study proposes price, service, and social sustainability as the main criteria. Social sustainability criteria are subcategorized into philanthropy and average salary which are quantitative measures and management policy which is a qualitative measure. Management policy is further categorized into organizational learning/training processes and programs and human rights and participation, occupational health and safety and vehicle safety.

3.3 Sustainability Performance Management and Evaluation

Through an extensive analysis of literature, Taticchi et al. (2013) has found out that traditional research has focused on measuring supply chain performance in terms of cost, quality, speed, flexibility and reliability which refer to the economic dimensions of sustainability. Further, the analysis has found out that in the last decade a considerable amount of research has been based on green supply chains or green logistics referring to environmental sustainability. But fewer research has shown the social dimension performance of supply chains. It also highlights the importance of developing research models and frameworks that are country-specific and industry-specific as the sustainability dimension impacts are context-dependent and technology-related.

Colicchia et al. (2013) propose a framework by analyzing the literature which consists of seven macro areas and these seven macro-areas are divided into two as inter-organizational and intra-organizational environmental practices. Distribution strategies and transport execution, warehousing and green building, reverse logistics, packaging management and internal management belong to the intra-organizational practices in the context of the logistics industry while collaborating with customers and external collaborations belong to inter-organizational environmental practices. The study found that logistics service providers have adapted many sustainability initiatives related to distribution and transportation activities while initiatives related to internal management are less. Internal management initiatives include environmental compliance and auditing programs, environmental performance measuring and monitoring, use of green IT, promotion of environmental awareness among managers, incentives and benefits for green behaviors and development of formal environmental sustainability standards of the company. It also highlights the lack of standard methodology for measuring the environmental impact and the need of developing effective performance measurement systems. With the case study conducted, Colicchia et al. (2013) found that the main driver for the environmental sustainability initiatives for logistics service providers is customers. The case study also revealed that the government rules and regulations are also an important driver, but it is often considered as a barrier by the logistics service providers.

Multi-dimensional performance assessment frameworks can support corporate activities in coping with institutional and stakeholder pressure and achieve long term strategies. Varsei et al. (2014) has examined four organizational theories namely, resource-based, institutional, stakeholder and social network theories to identify how factors from these theories assist the organization in a supply chain to adopt and develop sustainability practices. The study has stated that the motivation for the development of sustainable supply chains is from both internal sources (internal stakeholders, customers, suppliers, and managers) and external indicators which have been coined as drivers.

There are many tools to assess supply chain management practices like Odette ENALOG, Efficient Consumer Response (ECR), Oliver Wight Class: A Checklist for Business Excellence and SCOR model. Among them, the most sustainability-oriented model is the SCOR model. The SCOR model has become more matured with GREENSCOR, but still, it lacks the integration of all three dimensions of sustainability. (Emilie Chardine-Baumann, 2014) proposes a characterization model of sustainability based on fifteen (15) fields and sixty-seven (67) subfields which are drawn from the literature. The proposed model includes the rarely spoken social dimension and an analytical assessment model based on the composite index as well.

Research conducted by Azevedo et al. (2017) proposes a sustainability assessment tool consisting of indicators that represent economic, environmental, and social performance and aggregates them into a composite index. It also implies the importance of the selected sustainable supply chain indicators being measurable and verifiable. Delphi technique which is extracting unbiased information from a panel of experts is used to obtain weighted economic, social, and environmental indicators. To aggregate the indicators to construct a composite index, a linear additive aggregation technique called Simple Additive Weighting (SAW) method was used. SAW method can only be used on the occasions where all the variables are preferably independent. The proposed sustainability framework helps in assessing sustainability based on three sub-indices for each sustainability dimension and the company sustainability index is composed as a function of these three sustainability sub-indices. Using the proposed index, the ranking of the supply chains can be done based on sustainability and it helps to identify on which dimension the company has performed worst.

Schöggl et al. (2016) propose the ASSC framework (Assessment of Sustainability in Supply Chains Framework). It allows both qualitative and quantitative indicators to be incorporated when measuring environmental and social dimensions. It also allows the aggregation of relevant indicators into KPIs (Key Performance Indicators) concerning specific aspects of sustainability. The proposed ASSC framework and the aggregation method are fixed, but the sustainability indicators used are adaptable which will be able to reflect the dynamics of sustainable development.

Jung (2017) has used the Analytical Hierarchy Process (AHP) for its sustainability performance evaluation framework due to its ease of use and applicability in real-world scenarios. For further preciseness ‘fuzzy theory’ has been incorporated into the AHP to overcome the high degree of fuzziness and uncertainty of the answers. Fuzzy AHP has been used to translate verbal expressions of evaluators into numerical ones to be used in qualitative criteria. It has also applied the proposed framework to a real-world scenario by applying the proposed framework to evaluate three 3PL service providers of an e-commerce company. The study has proved that by changing the relative position of the criteria/sub-criteria in the proposed framework, decision-makers can determine the effect of such a change. Although the results show that the proposed framework is a good and viable alternative to evaluate the social sustainability of 3PL providers, the exclusion of the environmental dimension in the framework is a major drawback.

In 2017, in its study, Gan et al. (2017) has stated the importance of ‘Sustainability Indices (SI)’ in sustainability research and practice and mentioned that the weighting and aggregation of index components is a critical step in sustainability assessment. The weighting of sustainability indices reflects the relative importance of the different dimensions of the sustainability performance of an organization. Further, it reflects the trade-off ratios among dimensions if they are substitutable. Aggregation reflects the substitutability of different dimensions. Therefore, inappropriate weighting and aggregation may often lead to misinterpretation of the information. Weighting indicators can be categorized into three [3] as equal weighting, static based weighting, and public/expert opinion-based weighting. Aggregation methods integrate weighted components into a single composite index. (Gan et al., 2017) after their analysis of past literature, they have concluded that the widely used aggregation methods are additive aggregation methods, multiplication aggregation methods and non-compensating aggregation methods. When it comes to weighting methods, most of the studies (46.88%) used equal weighting methods. 21.88% adopted statistical-based weighting methods and only 23.95% adopted expert opinion-based methods. Although most of the researchers used an equal weight approach due to its simplicity and straightforwardness, it gives no insight of relationships between indicators and often has the risk of double weighting. Each weighting and aggregation method has its pros and cons. But the selection of the approach is based on the purpose of developing or using SIs, spatial or temporal scales at which the SIs are to be applied and specific type of sustainability that the SIs are used to assess.

Sustainability performance management approaches are diverse in nature. They include environmental management standards like ISO 14001, international Reporting Standards (Global Reporting Incentive - GRI), SCOR framework, Life Cycle Assessment, Multi-Criteria Decision Making (MCDM) tools (AHP, ANP, DEA, etc.), Rough Set Theory, Fuzzy Set approach, Composite indicators and conceptual frameworks. Industry-specific studies are sparsely present in the literature. Most of the studies are focused on developing general frameworks to assess supply chain sustainability. Even though there are studies with all three dimensions of sustainability, still the social dimension is lagging. Math focused methods and tools used to measure sustainability is exponentially increasing. Most of the studies have focused on measuring the sustainability performance between suppliers and manufacturers (Qorri et al., 2018).

There is no best method to be used when evaluating and measuring sustainability performance. Managers should select what is best for their organization according to the problem they are having. The method selected should be based on the number of supply chain members involving the activities, the number of indicators taken into consideration and data collected for the calculations. If it is a situation where the relationship between decision factors is high, choose either AHP or ANP. If the uncertainty of the decision factors is high, then the chosen method (AHP, ANP, DEA) should be incorporated with the fuzzy set theory. The success of the measurement and evaluation system depends on the ability of the information system of each supply chain member to capture data related to the sustainability dimensions of every activity (Qorri et al., 2018).

Oršič et al. (2019) propose the Green Innovative framework, 3PL GIF (Third Party Logistics Green Innovative Framework) based on social, economic, and environmental indicators. 3PL GIF checks the implementation of the business policies in all three dimensions of sustainability and helps the logistics service providers by altering them to use quality standards, measure them and continuously improve them. 3PL GIF provides an easy comparison between organizations and helps to identify lacking fields. 3PL GIF is using international quality standards to set up a sustainable policy and continuously measure and improve performance which in turn ensures the transparency and easy attainment of data. Furthermore, 3PL GIF also helps to control and achieve the goals for all logistics activities according to the principles of cyclical improvements. It incorporates the application of quality measurement standards and a PDCA cycle system of continuous improvements into indicators. 3PL GIF objectives compare the progress in sustainable development between organizations and can be applied to a logistics company of any size, varying from a small family business to global giants.

04. Discussion

The majority of the studies measure Supply Chain Sustainability Performance (SCSP) between supplier and the manufacturer where only a few of the Performance Management (PM) frameworks have focused on suppliers, manufacturers, retailers, and customers (Qorri et al., 2018). Studies on the logistics service providers are rare to find. Although there are studies on one or two dimensions of the sustainability performance (economic and environmental precisely) studies which incorporate the social dimension is still lagging (Qorri et al., 2018; Sweeney et al., n.d.; Taticchi et al., 2013; Varsei et al., 2014). Difficulty in identifying the relevant social indicators and identified indicators being highly subjective leading to challenges in quantifying them are the possible reasons for the lack of adequate studies on the social sustainability of supply chains (Qorri et al., 2018). Throughout the years, government, authorities in the supply chain logistic field and even media, have focused more on environmental sustainability and promoted the “Go Green” concept and it is also another reason for the less attention towards social sustainability.

Only a few studies have been carried out on environmental sustainability in the logistics service industry when compared to other dimensions of sustainability. Evangelista et al. (2018) in its descriptive analysis of literature has identified that there is a need to develop research aimed at identifying standard metrics to be used to measure green 3PL's environmental performance. And it suggests that researchers should look into developing frameworks to quantify the 3PL service providers' environmental aspects and their impact on finance and operations. Further, the analysis suggests that future research should better evaluate the efficiency of green measures by using alternative performance indicators as well.

With the exponential increase in demand for logistics services around the world, inevitably the level of CO₂ rose significantly over the years. Global logistics activities contribute around 9-10% of total global CO₂ emission and it is of the most difficult contributors to decarbonize. But with the sustainability initiatives logistics service providers are focusing more on addressing their environmental impacts. Environmental sustainability has now become a supplier selection criterion as well.

The following Table 1 shows how the past literature that has been considered in this study has used different indicators under each criterion in each sustainability dimension.

Table 1: Sustainability dimensions and criteria in logistic services

Sustainability Dimension	Criteria	Articles
Social	Work Conditions	(Chardine-Baumann & Botta-Genoulaz, 2014) (Varsei et al., 2014) (Haddach et al., 2017) (Oršič et al., 2019)
	Human Rights	(Chardine-Baumann & Botta-Genoulaz, 2014) (Varsei et al., 2014) (Santiteerakul et al., 2015) (Haddach et al., 2017) (Jung, 2017)
	Social Commitment	(Chardine-Baumann & Botta-Genoulaz, 2014) (Varsei et al., 2014) (Santiteerakul et al., 2015) (Haddach et al., 2017) (Jung, 2017) (Oršič et al., 2019)
	Customer Issues	(Chardine-Baumann & Botta-Genoulaz, 2014) (Varsei et al., 2014) (Haddach et al., 2017)
	Business Policies	(Chardine-Baumann & Botta-Genoulaz, 2014) (Jung, 2017) (Santiteerakul et al., 2015)
	Corruption Risk	(Azevedo et al., 2017)
	Sourcing from local suppliers	(Azevedo et al., 2017)
	Health, Safety and Security	(Santiteerakul et al., 2015) (Haddach et al., 2017) (Jung, 2017) (Oršič et al., 2019)
	Use of Resources	(Chardine-Baumann & Botta-Genoulaz, 2014)

Economic		(Varsei et al., 2014) (Santiteerakul et al., 2015) (Haddach et al., 2017) (Oršič et al., 2019)
	Supplier Environmental Screening	(Chardine-Baumann & Botta-Genoulaz, 2014)
	GHG Emissions	(Chardine-Baumann & Botta-Genoulaz, 2014) (Varsei et al., 2014)
	Waste Generation	(Azevedo et al., 2017) (Haddach et al., 2017)
	Use of Hazardous & toxic Substances	(Varsei et al., 2014) (Oršič et al., 2019)
	Environmental Standards & Certifications	(Chardine-Baumann & Botta-Genoulaz, 2014) (Varsei et al., 2014) (Santiteerakul et al., 2015)
	Responsiveness	(Chardine-Baumann & Botta-Genoulaz, 2014) (Santiteerakul et al., 2015) (Azevedo et al., 2017)
	Reliability	(Chardine-Baumann & Botta-Genoulaz, 2014) (Haddach et al., 2017)
	Flexibility	(Chardine-Baumann & Botta-Genoulaz, 2014) (Santiteerakul et al., 2015) (Haddach et al., 2017)
	Quality	(Chardine-Baumann & Botta-Genoulaz, 2014) (Santiteerakul et al., 2015) (Haddach et al., 2017)
	Supply Chain Cost	(Varsei et al., 2014) (Santiteerakul et al., 2015) (Haddach et al., 2017) (Oršič et al., 2019)
	Environmental cost	(Santiteerakul et al., 2015) (Azevedo et al., 2017)

Many of the research have used Triple Bottom Line (TBL) as the basis of their frameworks and already existing frameworks and standards like Global Reporting Incentives (GRI) and ISO standards (ISO 26000, ISO 14000) were used as the basis of the selection of sustainability indicators (Azevedo et al., 2017; Chardine-Baumann & Botta-Genoulaz, 2014; Haddach et al., 2017; Oršič et al., 2019). The following Table 2 has illustrated the various proposed frameworks by the past literature considered in this study including the sustainability dimensions and the output.

Table 2: Sustainability dimensions and the respective frameworks used in the literature review

Authors	Sustainability Dimension			Output
	Economic	Environment	Social	
(Colicchia et al., 2013)	—	√	—	Conceptual Framework
(Chardine-Baumann & Botta-Genoulaz, 2014)	√	√	√	Analytical Assessment Model
(Varsei et al., 2014)	√	√	√	Multidimensional Framework
(Ahi & Searcy, 2015)	√	√	√	Mathematical Model
(Santiteerakul et al., 2015)	√	√	√	Conceptual Framework
(Azevedo et al., 2017)	√	√	√	Composite Index
(Schöggl et al., 2016)	√	√	√	Conceptual Framework (ASSC Framework)
(Haddach et al., 2017)	√	√	√	Composite Index
(Jung, 2017)	√	—	√	Multi-Criteria Evaluation Model using Fuzzy AHP
(Badiezadeh et al., 2018)	√	√	—	Network Data Envelopment Analysis (NDEA) Model
(Qorri et al., 2018)	√	√	√	Conceptual Framework
(Oršič et al., 2019)	√	√	√	3 rd Party Logistics Green Logistics Framework (3PL GIF) Index

Although the definition of sustainability consists of three dimensions and the need for such research papers are high, sustainability dimensions are addressed in isolation and quantified indicators for an asocial dimension are underdeveloped. Björklund & Forslund (2019) mention that the main challenges when conducting sustainability logistics services are as follows.

1. Wide range of sustainability indicators
2. Challenge of measuring and quantifying the indicators – the majority of the social dimension indicators are subjective and difficult to measure. Therefore, quantifying the social aspects is a challenge.
3. Challenge of integrating sustainability dimensions as all three dimensions are interrelated and interdependent
4. Challenge of trade-offs between the dimensions
5. Influence from the stakeholders
6. Challenge of the time perspective
7. Contextual considerations

05. Conclusion

This paper serves as a guide to identifying the sustainability indicators, sustainability performance measurement and evaluation and the approached used by the literature between the years of 2010-2019. It is evident from the literature that although many studies have been carried out on the sustainability and sustainability performance evaluation of the supply chain, little research has been done on the sustainability performance evaluation of logistics service providers. Many studies have focused on economic and environmental (green) sustainability performance. But fewer research has been done incorporating the social sustainability of the logistics service providers. Many researchers

had proposed both conceptual and mathematical models with different approaches. Among the analyzed literature, various approaches like Analytical Hierarchy process (AHP), Data Envelopment Analysis (DEA), Fuzzy Set Approach, Life Cycle Assessment, Composite Indices have been considered.

Although many frameworks have been proposed by the above studies, many need to be further analyzed, tested, and confirmed by using case studies to give a better output. Furthermore, future research must focus more on incorporating various stakeholders' opinions and standardizations when deciding indicators as well.

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An Exploration of Contemporary Issues of Supply Chain Management: A Case on Pharmaceuticals Manufacturing Industry in Sri Lanka

Gunawardana, D. M. B. P. P.¹ and Herath, H. M. R. P.²

Supply Chain Management (SCM) has a crucial role in facilitating production, marketing, logistics and purchasing processes of an organization since it may focus on the management's attempts to maintain or build competitiveness in changing environment of those. This study was carried out as qualitative cross-sectional multiple case studies using semi-structured interviews to collect data. Case studies were chosen on the judgmental non-probability sampling method to explore contemporary issues and the reasons of SCM in the pharmaceutical manufacturing industry of Sri Lanka. It further tried to recommend the solutions to mitigate those issues to increase the effectiveness of the pharmaceutical supply chains. Interviews were conducted with the employees who are responsible for SCM from each case study. A thematic analysis was carried out to achieve the purpose of the study using Nvivo 12.

Unpredictable lead time, no proper guideline or standards in custom for pharmaceutical product regulations, lack of temperature control in warehouses at custom, underutilization of human resources consuming, delaying duty waiver and other regulatory approval from the National Medicines Regulatory Authority (NMRA), frequent changes of the NMRA guidelines without any grace period, technical knowledge gap of employees for R&D, and challenge from generic competitor products from other countries were identified as the major drawbacks in SCM process of pharmaceutical supply chains in Sri Lanka. Further, failure to identify correct raw materials suppliers, issue of Minimum Order Quantity (MOQ), buffer stock maintenance issues, no proper reverse logistics management procedures, shortage of approved vehicles for transportation, finding of trustworthy local packing materials suppliers, forecasting errors, and communication gap or language barrier of employees also slower the effectiveness of supply chains.

Keywords: *Material resource planning, Minimum order quantity, Pharmaceutical supply chain management, Resource based view, Transaction cost economy,*

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¹ Commerce and Management Faculty, University of Kelaniya, Sri Lanka
(pgunawardana2@gmail.com)

² Department of Marketing Management, University of Kelaniya, Sri Lanka

Introduction

The World Health Organization (WHO) defines a drug or pharmaceutical preparation as any substance or mixture of substances manufactured, sold, offered for sale or represented for use in the diagnosis, treatment, mitigation or prevention of disease, abnormal physical state or the symptoms thereof in man or animal; restoring, correcting or modifying organic functions in man or animal (Shah, 2004).

The global health economy is growing at a faster pace when compared to the overall economy (World Health Organization, 2008). Nevertheless, issues of inequity in healthcare provision and complexities in the healthcare systems persist across the globe, highlighting the need for efficient management of healthcare supply chains. Literature depicts an increase but a fragmented interest in supply chains in health services (de Vries and Huijsman, 2011). The complexity of the interactions between players such as government bodies, healthcare purchasing groups, healthcare providers and manufacturing companies has also resulted in attention towards the value-chain concept in healthcare (Pitta and Laric, 2004) by which it has made the pharmaceutical industry more dynamic.

Apart from health services, supply chains of healthcare products are important contributors to the healthcare system. Different healthcare products are distributed and traded differently and vary in their cost, criticality to delivery of patient care and potential impact on service improvement (Zheng et al., 2006). Among healthcare products, medicines account for 20–30% of global health spending (World Health Organization, 2010).

The supply chain of the pharmaceutical industry is similar to that of any other industry in the manufacturing sector. However, the pharmaceutical industry has only two drug distribution channels, which are prescription medicines and OTC (over-the-counter) medicines. The US Food and Drug Administration and regulatory bodies of all countries regulate both of these channels since pharmaceuticals directly affect millions of people's health, industry manufacturers are very strict about ensuring the safety and quality of drugs at each level of the supply chain.

Supply chain management (SCM) in the pharmaceutical industry can transform the organization to make better use of assets and resources, to generate profits, to enhance shareholder value, and to positively respond to customer demands (Bolineni, 2016). In a global market, managing the supply chain is a significant challenge, because of the continuous change in demands for the products with shorter lifecycles, industry consolidations, variable conditions on the ground (Assey, 2012).

Lack of effective SCM can cause problems for organizations (Shah, 2004). This is applicable to any industry. However, having no published literature found on the Supply Chain Management issues in the Sri Lankan pharmaceutical industry, this study was carried out to answer the following questions.

1.1. Research questions

1. What are the contemporary issues of supply chain management in pharmaceuticals manufacturing industry in Sri Lanka?
2. Why these issues have arisen in the pharmaceutical industry?
3. How to mitigate the explored issues of supply chain management in pharmaceuticals manufacturing industry in Sri Lanka?

2. Literature Review

The effective supply chain management can impact and expand upon virtually all business processes, such as data accuracy, operational complexity reduction, supplier selection, purchasing, warehousing and distribution (Dubey and Kumar, 2007). According to Arifuzzaman (2016) the benefits of SCM are included as quicker customer response and fulfillment rates, shorter lead time, greater productivity and lower costs, reduced inventory supply throughout the chain, improved forecasting precision, fewer suppliers and shorter planning cycles.

The term Supply chain is increasingly being applied instead of logistics and includes planning, sourcing, production and distribution. Supply chain evolution includes three periods; the first period is “inventory push” (1960-1975), in which the main focus is storage and financial management. The Second period is “customer pull” (1975-1990) focusing on customer attraction and product management and the third period is supply chain management, focusing on supply chain and managing relationships with customers (Yousefi & Albabaei, 2015).

According to the Halldorsson & Skjott-larsen (2006) and Knemeyer (2009), the application of multiple theories is gaining more attention to better understanding of dynamic supply chain. Ketchen and Hult's (2007) also have separated traditional supply chain and best value supply chain as; traditional supply chain focuses on limited outcome factors such as speed and cost while the best value supply chain is integrated with priorities such as cost, quality, speed and flexibility. Therefore, dramatic changes in the organizational values influenced by competitive forces can be considered as the driving factor behind the supposed paradigm shift in the business management that has advised the application of multiple theories for better understanding. Therefore, this study tried to use multiple theories for the better understanding and for ensuring the reliability and the validity of the research.

2.1. Transaction Cost Economics (TCE)

Transaction cost economics (TCE) says that during any economic interchange, the cost of the product or service should include all hidden costs like the time spent developing the relationship, the creation of contracts by a lawyer, or travel between various locations (Williamson 2002). Transaction cost economics applied to the critical decision points of purchasing of Make or buy decision and the Single or multiple sourcing. The decision to make a component tag within the company can be done to avoid risk (Geyskens et al. 2006) which sometimes leads to lower transaction costs. Williamson (2010) provides a guiding tool on when to buy a component from the market and when to build a component in the company. If smooth collaboration cannot be guaranteed through the security lines that leads to the failure of the supplier, and the buyer must produce the component in his own company, and reorganize the process to produce it himself, with the cost of reorganization and additional uncertainty (Williamson, 2010). Looking at multiple sourcing, the company might take the decision to use multiple suppliers in order to save costs. Using a single supplier outside the company to procure key activities, means simultaneously a loss of degree of control for the buyer and increased control over those key activities for the supplier. “Since it is possible for the supplier to have an impact on the buyer performance, the supplier could claim increased market prices” (Geyskens et al. 2006). The buyer might be trapped in that situation, knowing that switching costs occur when utilizing another supplier. Therefore, “the buyer might

contract the single supplier with enough safeguarding proficiencies, such as punishments, data divulgence, check techniques such as monitoring or incentives” (Williamson 2010, p.24-25) to coordinate the supplier and to ensure a sufficient collaboration. Since outsourcing by using multiple suppliers also means coordinating more vendor activities, managing more relationships and monitoring more suppliers (Schiele 2010), one can conclude that the regulation of transaction costs is widely branched.

2.2. Resource Based View

The resource-based view (RBV) explains how the unique deployment and combination of tangible and intangible resources might assist companies to achieve a sustainable competitive advantage (Grant, 1991; Priem & Swink, 2012). Applications of RBV in SCM is mainly focused on structural analysis (Miller & Ross, 2003) and identification of the qualifications for competitive advantage in the supply chain (Barratt & Oke, 2007). The majority of SCM decisions is supported by RBV (Halldórsson et al, 2007). Inter-organizational arrangements are made to enjoy the resource-position constraints built up by the collaborative efforts of companies to respond to uncertainties and changes. This is especially true when organizations do not realize that relying solely on internal resources is not sufficient to achieve competitive advantage (Jap, 2001). Supply chain capabilities refer to the ability of an organization to identify, utilize, and integrate both internal and external resources/information to facilitate the entire supply chain activities (Amit & Schoemaker, 1993; Bharadwaj, 2000).

2.3. Network Theory

Network Theory (NT) provides a comprehensive view of inter-organizational interactions in a network environment. It highlights the dynamics of network environments and identifies the impact of partner-partner relationships on the operations of the organization (Haldorsson et al., 2007). Emphasizing the concept of strong and weak Ties, the NT states that a network resource perspective helps managers to develop a more realistic assessment of individual node resources and their implications for businesses. By taking a network approach, organizations can plan their supply chains so they can take advantage of strong ties to build credibility and weak ties to build flexibility in managing their responsiveness. Another implication of NT for supply chain innovation is the demonstration of knowledge sharing mechanisms and management across the network (Miles and Snow, 2007).

2.4. Issues in Pharmaceutical Supply Chains

Booth (1999) says that in the recent past, the high return on investment and high revenue obtained from “blockbuster” products by pharmaceutical companies facilitated high productivity of R&D operations resulting in the creation of innovative compounds that helped in treating previously untreatable diseases. For effective patent for this type of molecule, the manufacturer should have the high R&D productivity. The patents led to the creation of technological barriers that prevent new entry. Therefore, limited number of substitute products are available in the market in a given therapeutic area for the patency period. The limitation of substitute products, thereby resulted in the price inelasticity of available product facilitated by the separation of prescribing and paying responsibility (Booth, 1999). To maintain a healthy product pipeline, pharmaceutical companies exploited the price inelasticity to achieve high margin and invest a large portion of their resultant profit in R&D (Shah, 2004).

Due to the above-mentioned regime that characterized the pharmaceutical industry has evolved and has made the current circumstances more complex and challenging (Shah, 2004). According to Shah (2004), based on the number of new chemical entities registered per unit of investment, R&D productivity is declining. Due to that, effective patent lives are shortening and their ability to make a barrier to new entry is also declining even while active. As a result, now there are many substitute or alternative products including off-patent generics available in many therapeutic areas. Even according to a CNBC 2017 report, Amazon also is considering entering the prescription drug business. The key players in the health sector have now been able to put pressure on the price elasticity and influence the practices now prescribed.

The global marketplace has become more liberalized, thereby exposing products to competition on a global level. There have been increased governmental and regulatory authorities' interventions due to the concerns for the increasing healthcare cost associated with the aging population. The type of intervention includes strict controls on the prices of new drugs, more cost-benefit analysis and encouragement of the use of substitute products or genetic substitutes where possible (Shah, 2004). As a result of these changes, "blockbuster" drugs are declining (Shah, 2004). As the result of the above, the current operating environments of the pharmaceutical industry have evolved and are more challenging than earlier. The establishment of regulatory authorities and market maturity have led to the increasing cost of production, increasing new drug introduction lead-time, increasing the number of substitute drugs, decreasing productivity of R&D, shortening the patent lives of new molecules, the reducing exclusivity period of new product, increasing pressure on price and prescription policies (Shah, 2004; Sousa et al., 2011).

In other words, the pharmaceutical industry is undergoing drastic changes to meet the new challenges of the global economy (Bravo, & Carvalho, 2013). Intensive globalization processes, increased competitiveness, the fast-changing structure of competitors, complex strategic positioning, shrinking pipelines, expiring patents, counterfeit drugs, increased regulatory scrutiny on profits and a fight for global market share are some of the factors contributing to new challenges facing the pharmaceutical industry (Bravo & Carvalho, 2013).

3. Methodology

This research required an inductive approach to explore the pharmaceutical industry and its supply chain issues and reasons for those issues. Hence a qualitative case study approach was used where the pharmaceutical manufacturing industry is selected as a case. The research methodology was ontological interpret inductive research approach. A study can be approached in three different ways whereas inductive, deductive and abductive. The main difference between inductive and deductive approaches to research is that whilst a deductive approach is aimed at testing theory, an inductive approach is concerned with the generation of new theory emerging from the data. As a qualitative research of this study, research approach was inductive while exploring new concept for pharmaceutical manufacturing industry.

There are different ways to select the methodology for specific research based on the philosophical assumptions and interpretative frame work. Quantitative, qualitative and mixed methodologies are the distinctive methodological choices available for a researcher. Qualitative research is research involved in analyzing and interpreting texts and interviews in

order to discover meaningful patterns, descriptive of a particular phenomenon (Auerbach and Silverstein, 2003). Merriam (2002) highlights that the main point to understand in qualitative research is that the findings or meanings are socially constructed based on individuals' interactions and experiences in the real world relevant to the research area. Many pharmaceutical supply chains related researches were conducted as case studies since case studies give in depth knowledge and understanding on what is going on within an organization (Shah, 2005). Zainal (2007), case study is defined as a method that enables a researcher to closely examine the data within a specific context. This study tries to identify contemporary issues in pharmaceutical supply chain management and there are no clearly identified boundaries with phenomenon in the context of this study. Therefore the study used a case study. Case study may adopt either a single-case or multiple-case design depending on the issue in question. The multiple-case design can be adopted with real-life events that show numerous sources of evidence through replication rather than sampling logic (Zainal, 2007). Therefore in this study selected multiple case study design to increase the confidence level of this study and to generalize finding with the Sri Lankan pharmaceutical industry.

It is consisted of five case studies through the data saturation and data triangulation techniques to identify the number of case studies. The study was cross sectional multiple case study design qualitative research. Sample design was non-probability judgmental sample due to the nature of the method. The data collection was completed using semi-structured interviews method. It was direct face-to-face interviews with supply chain managers, those who were working in the chosen organizations. The interviews were recorded verbatim and each of them was transcribed word to word. The transcribed interview guides were then, thoroughly referred to carry out a thematic analysis as the data analysis tool via Nvivo 12 software. The used coding strategies were in-vivo and prior coding. The trustworthiness/quality of the data was assured through triangulation of the theories of RBV, TCA and Network theory and transcriptions being verified by the interviewees.

4. Finding of the study

Figure 1, illustrates an overview of contemporary issues that were identified through this study. The identified issues are highly related with the upward supply chain and in-bound logistics whereas pharmaceutical manufacturers were not involved with the backward supply chain process. The only step was transportation of finished goods to the subsidiary company of them through State Pharmaceutical Corporation (SPC) and Medical Supply Division (MSD).

Bolineni (2016) noted the importance of having the right trading partner to source the raw materials and to destroy timely expired products for reducing the overall costs. This study has found the issues of raw materials and packing materials suppliers those who acts as primary suppliers who are with lack of trustworthiness. Furthermore, the mismatch of Minimum Order Quantity (MOQ) between supplier and agent, delayed deliveries and having no local raw materials suppliers are also some other issues revealed.

This study also found the significance of choosing the right trading partner for the raw materials supply. Since Sri Lanka is too small market for raw material suppliers, they are focusing more on the agents who are providing the service to manufactures. Agents are supporting to minimize the issues that are noted above

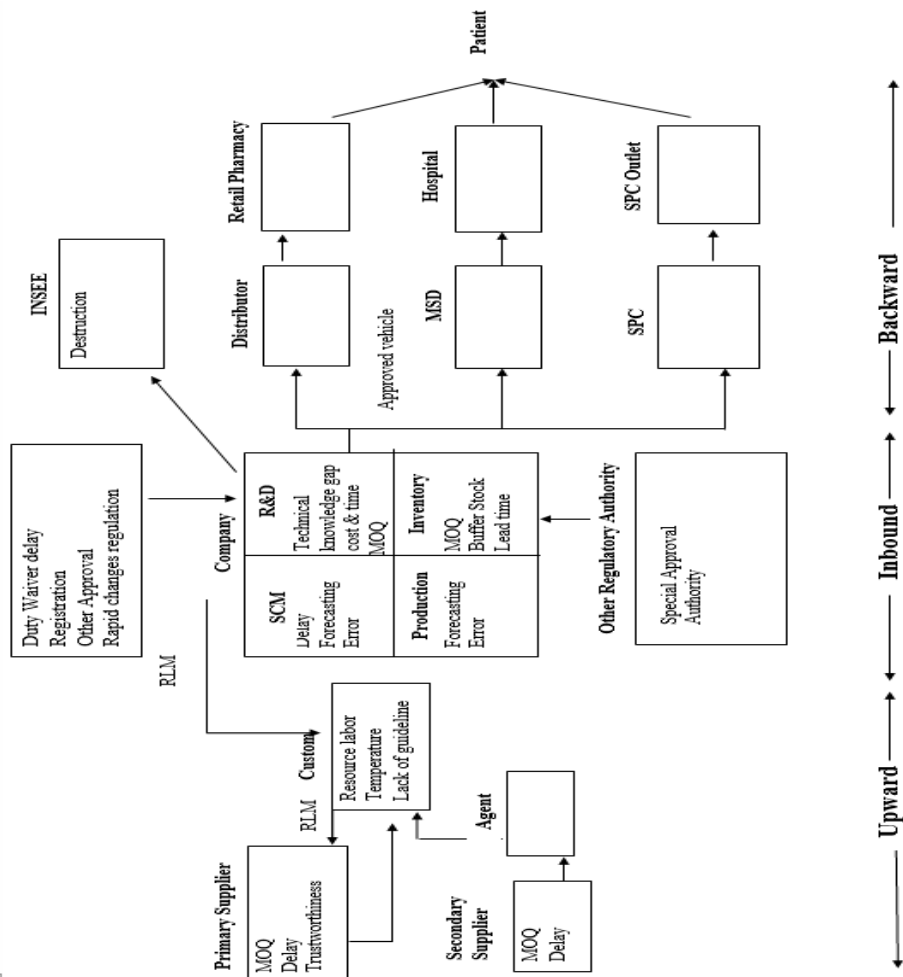


Figure 1: Contemporary Issues of the Sri Lankan Pharmaceutical Supply Chain.

while providing a comparably better service. Due to the extension of supply chains, delivery delays are still there and hence some companies keep two or three suppliers for the critical raw materials to minimize the issues of trustworthiness and the delaying.

However, minimum order quantity is a large issue according to the findings. Therefore, strategically some companies purchase quantities that suppliers are requesting then inventories are building up for the usage after re-validation. This can be an alternative strategy but inventory management cost will be increased and working capital issue may arise.

All imported raw materials and packing materials are coming through the custom. At the custom, many delays happen due to the reasons of: the lack of resource persons to deal with pharmaceutical items, lack of temperature control in warehouses to store pharmaceuticals until finished clearance procedure and lack of proper guidelines for the pharmaceuticals.

Packing materials and raw materials suppliers related issues as well as customs related issues are directly linked to the problems in inventory management. The short-term objectives of SCM are to enhance productivity, reduce inventory and lead-time. The long-term objectives

of SCM are to increase market share and integration of supply chain (Koh et al., 2007). However, in this study, it was identified that the effectiveness Supply Chain Management is challenged due to accumulation of high inventories, long lead-times, small minimum order quantities and issues of buffer stock maintenance. Custom delays happen due to the National Medicines Regulatory Authority rules and regulation changes, and duty waiver delays.

Pharmaceutical industry is highly regulated with the National Medicines Regulatory Authority. According the findings of this research, National Medicines Regulatory Authority procedures are very dynamic. Delaying duty waiver has universal impact on the total global supply chain. Not only that; registrations, manufacturing licenses and Good Manufacturing Process (GMP) approval are delayed but also they negatively impact on the Pharmaceutical Supply Chain. There is no agreed lead-time to approve a duty waiver from the National Medicines Regulatory Authority. Due to that, the identification of lead-time for the raw material sourcing is uncertain. With the uncertainty of lead-time, buffer stock maintaining is also difficult. To cope up with this issue they maintain three months stock. Case Study B uses the best strategy which is MRP planning and outsourcing to minimize the errors of buffer stock calculations.

The National Medicines Regulatory Authority is introducing new rules, regulations and guidelines without giving any grace period. It directly affects the supply chains of pharmaceutical industry. Due the rapid changes, the entire pharmaceutical industry is sometimes disrupting. Many researchers have identified various issues that are related to the Pharmaceutical Supply Chain such as R&D expenditures effect, government regulatory authority intervention, higher competition and sudden changes in global economy. The pharmaceutical industry traditionally has been constrained by rigid global manufacturing with specialized production equipment, long lead times for materials and extensive regulatory requirements. This has led to inflexibility and inability to react quickly to changes that are either capacity constrained or underutilized. These issues and National Medicines Regulatory Authority approval delays are mainly linked with the identified themes that were discussed above; shipment delays, extended lead time, minimum order quantity issues and buffer stock maintenance.

The National Medicines Regulatory Authority and government policies lead to restrict the investments on R&D and local manufacturing. The imported product prices are less than the same generic product which is manufactured locally due to the factors of not having to duties, for the imported medicine but the local manufacturers have to pay taxes other than the duty for raw materials.

In-bound logistic related issues were also noted: inventory management, product forecasting, reverse logistic management, communication gap between the departments, language barriers to deal with suppliers and finished goods distribution issues like lack of approved vehicles. According to Baltzan and Phillips (2010), the successful implementation of supply chain management, inventory management, cost, information, customer service and relationships are more important.

5. Discussion & Recommendation

The identification of these issues provides the opportunity for the industry to pay the attention to development strategies to mitigate such issues on correct way.

5.1. Contemporary Issues

This research has identified number of contemporary issues which affect to supply chain practices in pharmaceutical manufacturing industry. The issues can be classified as regulatory barriers, supplier selection issues, custom issues, inventory management issues, supply chain practicing issues R&D issues and distribution issues.

As per the previous research also it was clearly found that major crucial factors for overall industry performance include the SCM. The major issues of Sri Lankan context is delaying duty waiver which is only applicable to Sri Lankan pharmaceutical manufacturers. Implication of new rules and regulations without prior information and the time period also are significant factors. This issue reduce the overall performance of SCM directly as well as indirectly.

Correct supplier selection is a crucial factor for the effective and efficient SCM practices that is highlighted at previous chapters. This industry is facing another major issue of the selection of RM and PM supplier, such as selection of correct RM and PM suppliers. In addition to that the other issues were selection of trustworthy suppliers, language barrier and define lead time for the delivery without delays.

Another contemporary issue is related with the custom. For the effective SCM, information exchange with RBV, good TCE and agency relationship is mandatory. This study has identified custom issues which lack proper guideline and standards, lack of temperature control system in custom and lack of proper usage of human resources for the appropriate assignment are the identified issues. RBV theoretical application can minimize those issues in effective manner.

Inventory management is also critical for SCM practices in each type of industry. SCM is a complex process when compared with other industry. Due to the complexity, bulk stock maintain, MOQ and identify lead time for the each and every step in SCM.

R&D is a main pharmaceutical driver for the industry. However when compared with the other world, R&D practices are somewhat different as discussed at the literature review. Gap of technical knowledge, MOQ for raw materials and cost factor are the major issues for SCM.

5.2 Reasons for the supply chain issues

The Sri Lankan pharmaceutical manufacturing is still in the embryonic stage. Therefore issues are also very significant as discussed above. Supplier delays, custom delays, NMRA duty waiver delays are major reason for the many issues such are bulk stock maintain, lead time.

Sri Lanka does not have raw material manufacturers in the country. Therefore industry is always looking for the foreign supplier. It leads to many issues which are directly related to the supplier selection. Lack of proper implication of theories that are related to the SCM is another reason for the industry issue. Lack of proper usage of knowledge person for the respective work task is an issue for the custom as well as organization perspective. Forecasting error is another reason for bulk stock maintains and lead time. The NMRA change of rule and regulation negatively impacts for all the issues that were discussed in the above section.

5.3. How to mitigate issues

This study identified the contemporary issues and reasons for these issues. Then the study focused the strategies which are taken by the case studies to mitigate the issues. This section

concluded the strategies that were taken by the companies as well as strategies that are needed to be taken for the effective SCM practices in pharmaceutical industry.

To increase the effectiveness of SCM industry, dealing with agent of the some RM to minimize the issues can be considered. Application TCE as well as RBV for the minimization of the issue of MOQ, built strong relationship between suppliers and manufacturer while keeping minimum number of suppliers, practicing the MRP planning and outsourcing for the inventory are already practiced by the industry to some extent. From case to case the implications of those strategies are different. Therefore as industry has not practiced better supply chain management practices hence it had increased contemporary issues day by day.

Better applications of RBV practices will help to reduce the issues that are linked with custom as discussed in the above section. It is better to practice network theory while working with NMRA and other regulatory bodies to make strong relationship between the parties which will help to minimize such issues. Keeping the coordination, information exchange and increasing the supply chain responsiveness helps in effective supply chain practices.

5.4. Conclusion

This study was carried out with the purpose of exploring the supply chain related contemporary issues in Sri Lankan pharmaceutical industry.

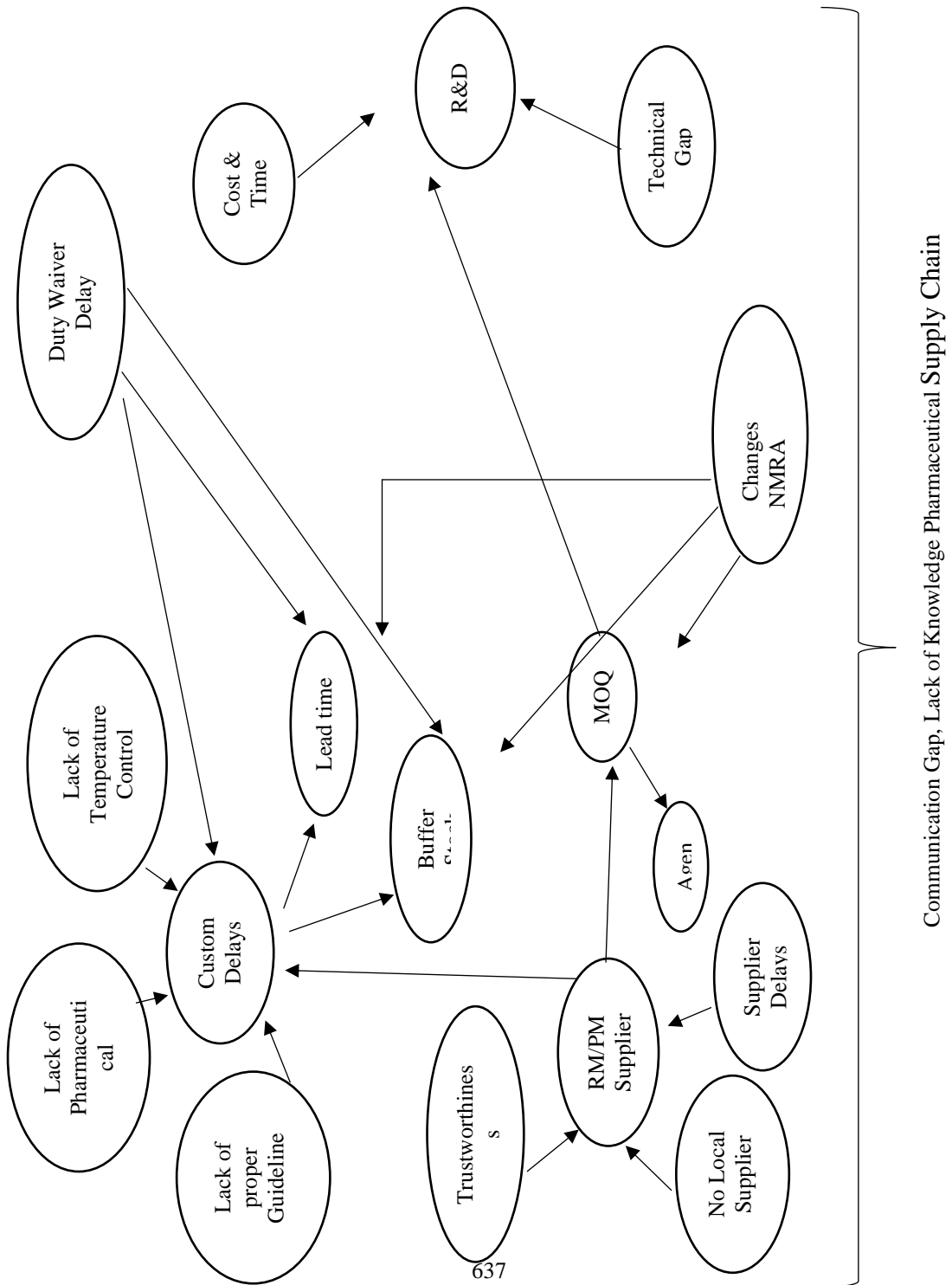


Figure 2 - Interrelationships among the identified issues

The findings overall discuss how they have influenced in making the Sri Lankan pharmaceutical supply chain vulnerable in the global scenario and what kind of strategies are being used by these companies to overcome them. Nevertheless, when the identified issues and the way they are influencing on the overall pharmaceutical industry were carefully reviewed, the following interrelationships (Figure 2) among them is clearly visible as a virtue of summarizing the overall study.

The findings of this study will also be useful in understanding the nature of the Sri Lankan pharmaceutical industry supply chain in a nut shell so the policy makers can assist in formulating the best strategies to overcome certain regulatory and administrative issues, too.

5.5. Recommendations for future research

This research has come up with many questions for further investigation from different perspectives: Identify issues with pharmaceutical distribution network in Sri Lanka with comparison in between small scale manufacturers with large scale manufacturers.

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Impact of Smartphone Addiction on Academic Performance of Undergraduates in Sri Lanka; Mediating Effect of Technology Driven Multitasking

Praveeni, S. M. N.¹ and Wickramasinghe, C. N.²

The development of technology has a profound impact on the academic lives of the students. Smartphone usage has become popular among young generation because of its educational and entertaining options by using the numerous applications. Among the young people, students are increasingly using Smartphone. However excessive Smartphone usage usually makes the students get addicted to it and that impacts on user's academic performance. This survey study was designed to examine university undergraduates' level of Smartphone Addiction (SA) and to investigate the impact of SA on their Academic Performance (AP) with the mediating effect of Technology Driven Multitasking behaviour (TDMT). There is not much evidence in Sri Lanka to accept the actual impact of SA and TDMT on AP of undergraduates. Especially, generation Z digital natives and their multitasking behavior with the emergence of superficial technologies should be comprehensively discussed to answer to the problem of, does SA and TDMT impact on AP?

The data were gathered from 315 students at four universities. Scope is limited to management undergraduates in Sri Lanka. SA is defined as the independent variable (IV) of the study. Undergraduates AP is identified as the dependent variable (DV) of the study. TDMT is considered as a mediator variable. Descriptive and inferential analysis were used while regression analysis was used to test hypotheses. Further, Sobel test is used to test the mediate effect in the relationship between IV and DV. The findings of this study indicated that university students were highly addicted to the use of smartphones. Data analysis showed that SA negatively impact on AP while TDMT also negatively impact on DV. Further, TDMT mediates the relationship between IV and DV. This study suggests that the students should reduce the intense use of Smartphone in order to perform well in their academic activities.

Keywords: AP, SA, TDMT, Undergraduates

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¹ Department of Business Management, Faculty of Business Studies and Finance, Wayamba University of Sri Lanka (praveeni@wyb.ac.lk)

² Department of Commerce and Financial Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka

Introduction

Over the last decade, smartphones have fully penetrated into human lives. People are moving their fingers on the smartphones' screens in homes, offices, parks, markets, bus-stops, and even in classrooms. The smartphone has become one of the most pervasive technological devices in humans' day today lives (Alfawareh and Jusoh 2014; Emanuel et al. 2015; Hossain and Ahmed 2016). Interestingly, the use of smartphones has momentarily blown up in the last few years, driven mainly by the ubiquitous nature of this technology, lower costs, access and affinity displayed by this demographic group, to these devices (Prensky, 2001). As per the statistics shared by Deloitte in the Global Mobile Consumer Survey, the US edition, mobile phone penetration in the US alone is 85% among the baby boomers and about 90% among the millennial. The proliferated use of smartphones poses new challenges for higher education institutes along with the detrimental effects these devices have on the overall academic performance of university students.

University students use smartphones for playing games, music, and videos, surfing on the Internet, accessing their bank accounts, checking news and weather, connecting on social media and using several other applications and features that their phones provide and even while they are in the classroom (Emanuel et al. 2015). Generally, smart phones addiction can be viewed as a mental state where a person is so much attracted to the multitasking functions and applications of the smart phones and where he/she uses it as his/her daily routine activity.

Social Construction of Technology Theory approach identified that psychological motives might stimulate the technology adaptation rather than the availability and the affordability of those technologies (Bijker et al. 1987). In line, with that researcher considered SA as a psychology motive that enables technology driven multitasking ability of the undergraduates.

A Study (Fox, Rosen, & Crawford, 2009) found that most of the college students tend to multitask most of their activities with the use of smartphone and engage with technological activities than reading in leisure time. Compared with the past, students use technology and tend to multitask, very often during learning activities, and it has become a common place in the university classroom (Calderwood, Ackerman & Conklin 2014). Furthermore, smartphone use may interfere with study-related activities. The proximity of the mobile device can be a tempting distraction, leading to multitasking or task-switching. A growing body of literature (Junco, 2012; Junco & Cotten, 2012; Levine, Waite, & Bowman, 2012) has shown this behaviour's negative implications with respect to educational performance.

The threaded cognition theory by Salvucci and Taatgen (2008) argued that two different conditions cause active goals to be displaced in favour of others: external interruptions and internal voluntary decisions to stop an ongoing task to attend to another and emphasized memory as a central process in task suspension and resumption; thus, interrupting tasks with more significant memory usage should, in general, cause more disruption will lead to a decrease in overall performance on the task. Another study found evidence to prove that undergraduate business students sacrifice some certain academic works and studytime because of "technological distractions" such as Facebook, YouTube, Viber and other similar electronic information and communication technologies. These factors are profoundly impacting student focus, attention, distraction and consequently, AP (Fox, Rosen, & Crawford, 2009).

Researchers, around the globe, studied students' perspective about SA and found that smartphones entertain students and help them to escape from academic pressure. Students usually use smartphones for self-expression and to maintain their social relations (Albarashdi et al., 2016). On the other side, it has also been found that in some cases, students use smartphone apps for their academic work (Kamran, 2010).

However, the excessive usage of smartphone causes adverse effect on users who gradually become addicted to it. It has been observed that SA is more severe than the addiction to mobile phones, computers, and even internet. Several studies have been conducted to measure the impact of SA and

AP among university students. Alosaimi et al. (2016) and Aljomaa et al. (2016) studies conclude that SA creates negative impacts on students' AP. These contradictory findings may not give a clear-cut answer.

Apart from that, most of the scholars investigated about how SA impacts students' participation in their AP. Specifically, less attention has taken place regarding how SA impact on AP through TDMT. Based on the identified research gaps and the problem statement, a need is felt to carefully evaluate the manner, and the current survey study attempted to inspect university students' SA direct and indirect impact on AP with the mediating effect of TDMT.

Literature Review

The term addiction has been mostly associated with drugs, alcohol, gambling etc. Technology addiction has been recognized since the mid-1990s as a new kind of social problem as the media started paying increasing attention to the idea of computer or internet addiction (Shaw & Black, 2008). Accessed by computer, the Internet provides users with the opportunity to escape from one state of consciousness and visit different worlds of information with all the euphoric mind-bending properties associated with new adventures and problem-solving (Shaffer, 1996). With the onset of mobile phones, a new kind of addiction was found to be emerging.

Nowadays youth's lives revolve around mobile phones. Kibona and Mgya (2015) conducted a research to explore whether SA is creating any impact on students' AP. Researchers, James and Drenn (2005) have reported that university students spend about 1.5–5h on their smartphones per day. A study on students in Pretoria suggests that mobile phone usage is dependency forming, compulsive and habitual and the researcher suggests that it may be the biggest non-drug addiction the 21st century might be facing (Shambare, Rugimbana, & Zhowa, 2012). In another research Roberts, Yaya, and Manolis (2014) suggest that addiction to one's cell-phone is ultimately an attempt to escape another, more significant problem, such as boredom, low self-esteem, relationship trouble, etc.

The excessive use of smartphone and the psychological symptoms associated with it leads to SA (Bianchi & Phillips, 2005). A study on Ruaha Catholic University students has revealed that impact of Smartphone on the AP of higher learning students, bring negative results or adverse effects on students' performance academically. When students were asked about the distractions they get when they are in class, and someone texted him/her, the majority accepted that they are distracted from the lectures and start on concentrating on replying the messages which is sent to them which eventually causes poor AP at the end of semester (Kibona & Mgya, 2015). Aljomaa, Qudah, Albursan, Bakhiet, and Abduljabbar (2016) state that Smartphone addicts tend to neglect work and study, isolate themselves from friends and family and remain attached to the Smartphone. Smartphone addicts are positively related to psychological traits including loss of control, social interaction anxiety, materialism and the need for touch.

In a number of other studies, smartphone and internet addiction were found to have negative effects on academic success as well (Erdem, et al., 2016; Lićwinko, Krajewska, Kulak & Lukaszuk, 2011). Students who have excessive smartphone and internet use may have a harder time paying attention to course hours, participating in the active learning process in class, and participating in the school activities expected of them.

Hence, the researcher aimed to examine the extent of students' knowledge of SA by testing the following hypothesis,

H₁: There is a significant impact of SA on the AP of university undergraduate.

H₂: There is a significant impact of SA on TDMT.

H₃: There is a significant impact of TDMT on AP.

H₄: TDMT mediates the relationship between SA and AP.

Based on the hypotheses formulated for this study, a conceptual model to be tested was developed. This is shown in Figure. 1.

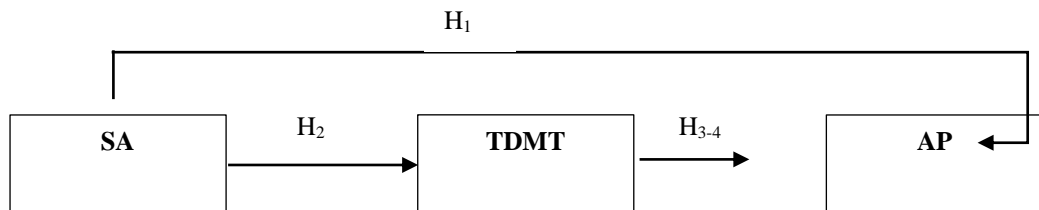


Figure. 1. Model of the study

Measurement of Smartphone Addiction was measured through SAS-SV validated scale which was originally established in South Korea, but published in English (Kwon, Kim, et al., 2013). This scale is a shortened version of the original 40 items scale. It is a ten-item questionnaire used to assess levels of smartphone addiction. Participants were asked to rate on a dimensional scale how much each statement relates to them, (1 “strongly disagree” to 6 “strongly agree”).

The frequency of multitasking during class was evaluated using the question “How often do you do the following activities during class?” with prompts for Facebook, IM, email, talking on the phone, texting, and searching for information online that is not related to the class. The possible choices for multitasking frequencies will be worded: “Very Frequently (close to 100% of the time)”; “Somewhat Frequently (75%)”; “Sometimes (50%)”; “Rarely (25%)”; and “Never” (Perera, 2017; Junco and Cotton, 2012).

The outcome of the study was the Academic Performance of the university undergraduates which was measured through academic performance proficiency scale (students’ ability to perform academic tasks and solve problems) which is a four-item scale, used in the study by Yu et al. (2010), who adapted it from Chao et al. (1994).

Methods

The study applied the quantitative design utilizing the questionnaire for data collection. The questionnaire was comprised of four sections namely; Independent variable section, mediate variable section, dependent variable and generic information section. Gender, year of birth, university name, level of study and type of technology devices used formed the generic information. In addition, the IVs was SA and TDMT was the mediate variable while the dependent variable was AP.

The study targeted a population of 5196 level three management faculty undergraduates in state universities in Sri Lanka. These respondents were born after 1995 who were considered to be as Generation Z digital natives as they use technological devices along with google, iPod, email and chat rooms (Sweller, Kirschner & Clark, 2007).

According to Creswell (2009); Creswell and Plano Clark (2017) followed by the cross-sectional survey, distribution of the questionnaire was conducted and yielded 315 responses from the targeted 357 potential respondents which constitutes 88 % response rate. According to Krejcie and Morgan (1970), the minimum sample size for a population of 5196 is about 357 respondents’ sample and also according to Roth & BeVier (1994) the minimum acceptable level of response rate is 80%. Thereby, the sample obtained within this study was an adequate representation of the total population. Questionnaires are an efficient data collection mechanism when the researcher knows exactly what

is required and how to measure the variables of interest. Questionnaires can be administered personally, mailed to the respondents or electronically distributed (Sekaran, 2006). This study has made use of a closed-ended questionnaire to collect data from selected university undergraduates who are following management stream.

The resulting data obtained from the respondents were entered into SPSS software version 21 and results were further entered to the Sobel test calculator in order to check the mediate relationship.

Findings of the Study

Respondent profile

Respondent profile of the respondents formed the preliminary analysis. This is shown in Table 1.

Table1: Respondent profile

Profile	Frequency	Percentage
Gender		
Male	91	29
Female	224	71
University name		
University of Jayawardhanapura	96	30
University of Colombo	70	23
University of Kelaniya	63	20
Wayamba university of Sri Lanka	86	27
Type of devices		
Smartphone	315	100
Desktop	110	35
Laptop	257	82
iPad	10	3
Tablet	34	11

Source: Survey results (2019)

Accordingly, female undergraduates were the dominated category in the sample. In terms of the age categories, undergraduates were born in 1995 and 1996. Contemporary students in this age category are considered as digital natives and affect multitaskers. In terms of university representations, majority were from University of Sri Jayawardanapura as far as sample represents large proportion by undergraduates from University of Sri Jayawardhanapura.

Out of 315 surveyed students, all of them had at least one device. According to the survey results, the most commonly used technology device by the students was the smartphone. Among the surveyed, students' laptop computers were slightly prevalent. 257 students had their laptop, and 110 had their desktop. Whereas, only less number of students used tab. t and iPod which was 34 and 10 respectively. Further, statistics showed that six students had all of these five technological devices for their usage while only 54 (17%) students had only one device.

Internal consistency measures for measurement model

In determining the internal consistency of constructs in the model, Cronbach's alpha and KMO and Bartlett's test were used in line with recommendations from Hair et al. (2017) and Kline (2015). Table 2 shows the results on the internal consistency measures of the reflective model.

The values obtained from Cronbach's for the reflective model shows that the model achieved reliability standards as the value of Cronbach's Alpha greater than 0.7 is considered reliable (Nunnally, 1978). According to the factor analysis results (Table 2), values for the KMO test were above 0.5 and all the values for Bartlett's test indicated below 0.05 which confirmed the validity requirements of the data set. The KMO test was used to verify the sampling adequacy for the analysis.

Table 2: Construct Validity and Reliability

Constructs	Cronbach Alpha	KMO value	Bartlett's Test
SA	0.881	0.848	.000
TDMT	0.846	0.834	.000
AP	0.900	0.827	.000

Source: Survey results (2019)

Prior to the data analysis, missing values, linearity, multicollinearity, normality and outliers were tested and it was confirmed that all the assumptions were met and the data is normally distributed.

Objective 01: Determine the impact of SA on AP of university undergraduate.

To examine the impact of SA on AP, multiple regression is carried out. As per the Table 3, SA is statistically significant to AP.

The regression analysis revealed that the standardized coefficient values of SA is negatively impact on AP. Therefore, H₁ is supported. That emphasized when the SA increases it will affect to decrease the AP of university undergraduates. R², coefficient of determination which indicates 45.1% of the variance in AP can be predicted from the SA.

Table 3: Regression Analysis of IV on DV

Model	Standardized Coefficients			
	B	Std. Error	t	Sig.
1 (Constant)	5.879	.177	33.233	.000
SA	-0.260	.053	-5.353	.000
R ²	0.451			
F	65.550			.000

a. Dependent Variable: AP

Source: Survey results (2019)

Objective 02: Determine the impact of SA on TDMT.

The researcher used regression analysis to predict the TDMT based on IVs of SA. SA has statistically significant relationship with the mediator variable (F=54.587, sig=0.000). It revealed that the standardized coefficient values of IV positively impact on the TDMT of university undergraduates. Thereby, analysis can be derived as university undergraduates' multitasking is high if their technology factors and psychology factors are at a higher level. Thereby, H₄ is supported.

Table 4: Regression analysis of IV on Mediate variable

		<u>Standardized Coefficients</u>		t	Sig.
		B	Std. Error		
1	(Constant)	5.879	.177	33.233	.000
	SA	-0.260	.053	-5.353	.000
	R ²	0.451			
	F	65.550			.000

Source: Survey results (2019)

Objective 03: Determine TDMT on AP of university undergraduate.

The researcher used simple regression to predict the direct effects of TDMT on AP. Thereby, TDMT is statistically significant with AP ($p < 0.00$). The regression analysis revealed that the standardized coefficient values of TDMT negatively impacted on AP of university undergraduates. Thereby, analysis can be derived as university undergraduates' AP is high if their TDMT level is at a low level ($B = -0.362$ $p = 0.00$). Therefore, H_3 is supported by the results of the present study.

Table 5: Regression analysis of Mediate variable on DV

		<u>Standardized Coefficients</u>		t	Sig.
Model		B	Std. Error		
1	(Constant)	4.454	.151	29.502	.000
	TDMT	-0.362	.046	-6.871	.000
	R ²	0.131			
	F	47.207			.000

a. Dependent Variable: AP

Source: Survey results (2019)

Objective 04: Determine the mediating effect of TDMT.

The Sobel test (Sobel 1982) is conducted to determine the significance of the indirect effects for mediator TDMT. The interactive calculator is employed (Preacher & Leonardelli 2010). Accordingly, a significant indirect effect was found in the SA - TDMT- AP relationship (test statistics = -1.20660863; $p < 0.05$). Thus, H_4 is supported.

Table 6: Sobel Test

	<u>Sobel test statistics</u>		
	Test statistic:	Std. Error:	p-value:
SA	-1.20660863	0.01094473	0.00394005

Source: Survey results (2019)

Further, the sizes of the products of the indirect effects for TDMT as a mediator are analyzed.

Table 7: Size of the indirect effects with TDMT as a mediator

Mediation Effect	Path a	Path b	Size: a*b
SA → TDMT → AP	0.171	-0.362	-0.061902

Note: SA= Smartphone Addiction; TDMT= Technology driven Multitasking; AP= Academic Performance.

Source: Survey results (2019)

Discussion and Recommendation

This study looked into SA of management undergraduates among four leading state universities in Sri Lanka. The purpose of this study was to describe the impact of SA on AP with the mediating effect of TDMT.

It can be concluded that higher SA leads to better level of multitasking abilities among students. However, when it is considered in the field of academic, data analysis confirms that there is a significant negative impact of SA and TDMT on the AP. When undergraduates are highly addicted to the smartphones, they spend less time for academic activities. Hence, the AP or GPA will be decreased. Furthermore, TDMT mediates the relationship between IV and DV. When SA directly impact on AP of the students, it also has an indirect impact through multitasking as well. Hence, it can be concluded that AP can be strengthened and enhanced by effectively utilizing the level of TDMT of the university undergraduates.

Ultimately these findings are also theoretically in line with the literature in threaded cognitive theory which showed attempting to pay attention to two stimuli simultaneously reduce one's ability to both, paying attention and process either of those stimuli. Therefore, these findings give a clear-cut answer to the contrast findings on the relationship between SA and the AP. On the other hand, the generation Z digital natives cannot separate from disruptive technologies. Findings prove that they are greater multitaskers and considered to be superficial with latest technologies. Thereby, with the emerging trends of smart classroom concept in education environment, multitasking with technologies should be effectively regulated for better AP.

Based on the findings, it is recommended that the students should reduce the use of smartphone and addiction to it and prioritize their academic tasks (Hiscock, 2004; Selwyn, 2003). Many education institutions have restricted the use of smartphones and other technology in the class room, while studying and some institutions have banned cell phones or else required students to keep them in a separate box by the door to be retrieved at the end of class. The concepts like technology breaks can be introduced to remove both internal and external distractions whenever they engage in learning.

Primary limitation of this study is the majority of the sample were born after 1995 and this will limit the generalizability of the finding to other age categories. Future research can incorporate a more diverse population. Moreover, this study is a cross sectional study. Thereby, longitudinal studies can be done in order to determine the variance level of academic performance. This study is also limited to the undergraduates in management faculties in Sri Lanka. Further research will replicate this study with a more diverse sample in terms of different streams. The study only relies on quantitative data, which confined the understanding of the phenomenon in more details. For future studies, it will better to use a mixed method and include students for indebting interviews or case study. Further, future research can be conducted by actual measurements of actual time spent on multitasking behavior, through observation or online tracking method. Further it is recommended, to incorporate different methodologies to analysis the SA with different aspects in various context which will facilitate to have a strong awareness of effective utilization of technology devices.

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Implementing the Paperless Process through the Employee Database Management System - Case study: With Special Reference to Non-Academic Establishment Division in University of Kelaniya

Dompelage, P. T.¹

In the global competitive environment, Employee Database Management is a really powerful system in the public sector organization. Most of the Public Sector Organizations do their work through the manual system. According to the present situation of the global world, social distance is more important. In that situation the public sector organizations have found the solutions to do their work efficiently. Hence, the key objective of this study is to understand the existing process in the increment form procedure in non-academic staff and introduce a paperless process through the fully automated system for preparing salary increment. Sample data was collected from the existing increment form process of the university of the last three years and simple statistical tools such as mean values and percentage values were used in the analyzing process of the study. The results showed that there was a waste due to unnecessary processes and practices in the existing process, which leads to inefficiency in the system. The proposed automated system includes a paperless process and saves the cost and time through the efficiency of the system.

Keywords: *Efficiency, Employee Database Management System, Paperless Process, Public Sector*

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¹ Non-Academic Establishment Division, University of Kelaniya, Sri Lanka
(tara.pushpika@kln.ac.lk)

Introduction

Introducing an employee management system is not easy for the public sector organizations which is mainly based on the employee performance and fulfils the organizational vision and mission through the organizational objectives, because most of the employees do not like to change their day-to-day activities. Using the employee database management system, administration can reduce their complex situations. The employee management system is designed for the optimum saving of cost, time, power and work activities for employees. The employee management system directly connects with the employee performance and efficiency of the employee. This system can manage all the details about the non-academic staff employees, such as their qualifications, performances, payroll details and maintains the information about the personal details of their employees. The organizations can introduce various types of employee database management systems, because the necessity of information or details are not equal in every public sector organization. The University system is considered as one of the biggest powerful weapons in Sri Lanka which consists of 7847 teaching staff and 15151 non-teaching staff, who are handled by the University Grants Commission. (Sri Lanka University Statistic 2018). The University of Kelaniya does not maintain a Non-Academic employee database management system as yet. All the Non-Academic personnel files and other necessary details are maintained through a manual system. The manual system has various types of weaknesses. There are seven hundred forty two non-academic employee personnel files, handled by the non - academic establishments division. These employees can be categorized into forty one non-academic posts. The Non Academic establishments division has twelve management assistants and they are involved in handling all the non- academic details through a manual system. Especially, management assistants in the Non Academic Establishments branch have to maintain all the personal information and organizational information. The Employee Management system is very important, because it is prepared with the intention of avoiding making the same mistakes again. The administration can get many advantages by using the Employee Data Base Management System. For example, the proposed system is more user friendly, flexible and reliable giving quick access to information, facilitating timely report generation and reducing manual work. The main objective of this research is to reduce the paper usage and reduce the effort of administrative work. The proposed EDMS consists of seven modules. These are Personal Details, Professional Qualifications, payroll, performance, training and retirement. The employee database management system is designed for saving money, time and power while working well for the team. In an organization, to simplify the process of record it has designed a system of employee management. For HR functions, it helps to handle the employee's information. For improving effectiveness of workplace management, an employee management system has been implemented. This employee management system handles the overall performance and different aspects of an employee in an organization. There are more benefits of introducing paperless work (Plimmer & Apperley, 2007). Change is rarely easy, particularly on an organizational level, because people are resistant to changes in their behavior. Most of the employees want to do their regular activities in the manual way (Chao, 2015).

Objectives:

- To understand the existing manual process in employee salary increment
- To introduce a paperless process in employee salary increment

The problem identification

Manual handling of information is a critical part of the organization, because all the information is not secure. Mainly, the public sector organizations have faced many problems in implementing such a system. One of the problems, is insufficiency of human and material resources and the capacity available for the implementation, because the public sector organizations are run by the government funds. Most of the organizations do not earn funds. In that situation they have to face many problems. Other issues are the management not giving priority for the implementation and the lack of organizational commitment. The present situation is that most of the employees are resistant to

change. They want to do the same procedures and to use the paper process. All the documents are filed. Some employees have more files. Some personnel files have not been completed, because some increment decisions have not been attached. Some salary steps were not given according to certain situations and some documents are missing in various types of situations. Time to time personnel file handling persons is transferred in various situations. On those occasions Head of the Department or Management has to solve these problems. Rarely, some employees file law cases against the organizations.

Existing System

The Employee database management system is every important today. Because of the present situation of the world, social distance is necessary for persons. In that way every organization wants to do their work through the system and not through physical attendance. At present all the Non-Academic employee's personal and official details are handled by the non-academic establishments division through the manual system using the record method. Personnel files are created on the first day of the employees. All the details are filed. It is complicated. Because extra effort, cost and time are needed to carry out that work. Sometimes data is not available on time because it takes more time to calculate or collect some information. Once a year, every employee gets their salary increased through the recommendation of the relevant Head of Department. According to the establishments code, increment period is based on one year. Two months before the completion of the one-year period, the Subject Clerk should have checked the personnel file carefully. After that, the Subject Clerk fills the increment form according to the personnel file details. Then that Subject Clerk sends the form to the Leave Clerk to fill the leave based on the leave record. After filling all the necessary details, that document is sent to the Head of the Department/ Non-Academic Branch for sign. After that, the increment form document is sent to the relevant Department to get the recommendations. After receiving the recommendation document by the Head/ Non-Academic, the Subject Clerk has to prepare the present salary scale and sends the necessary document to the salary branch through the head/Non Academic. Finally, the employee can get the present salary.

Table One – The number of leave forms prepared by the Non - Academic Establishments division for nonacademic staff

Number of Employees	Year			Average Per Year
	2017	2018	2019	
	695	725	742	

Source: Observation Data 2019

The table one shows, the number of employees qualified for increment every year. The non-academic establishments division and the staff of the non-academic branch should prepare the increment documents through the personnel files of employees.

Table two – The time taken at each position in existing increment form procedure

Description	Year			Total	Mean
	2017	2018	2019		
Number of Increment forms	695	725	742		
According to the personnel file, fill the Increment form (Personnel File subject Clerk)	695x 30 min ¹ 20850 min 347.5 hours	725x 30 min 21750 min 362.5 hours	742x 30 min 22260 min 371 hours	64860 min 1081 hours	21620min 360.3 hours
Fill in the leave record (Leave Clerk)	695x10min ² 6950 min	725x10min 7250 min	724x10min 7240 min	21440 min	7146.6 min

	115.8 hours	120.8 hours	120.6 hours	357.3	119.1 hours
Check and Sign (Head/ Non Academic)	695x7min ³ 4865 min 81 hours	725x7min 5075 min 84.5 hours	724x7min 5068 min 84.4 hours	15008 min 250 hours	5002.6 min 83.3 hours
Fill the Increment form based on the employee performance	695x20min ⁴ 13900 min 231.6 hours	725x20min 14500 min 241.6 hours	724x20min 14480 min 241.3 hours	42880 min 714.5 hours	14293.3 min 231.1 hours
Preparing present salary scale	695x10min ⁵ 6950 min 115.8 hours	725x10min 7250 min 120.8 hours	724x10min 7240 min 120.6 hours	21440 min 357.3	7146.6 min 119.1 hours
Total	53515 min 891.7 hours	55825 min 930.2 hours	45206 min 937.9	165628 min 2760.1 hours	55209.1 min 912.9 hours

30 min¹ – This particular time pertains to the checking of the employee personnel file and filling the Increment document according to the details.

10min² – This particular time pertains to the filling of the leave record, according to the previous year.

7min³ – This particular time pertains to the checking and signing of the document by the Head of the department/ Non-Academic Establishments branch

20min⁴ – This particular time pertains to the filling of the Increment form based on the employee performance. The relevant Head of the Department discusses with the employee and then fills the document.

10min⁵ – This particular time pertains to the situation to where, after the Recommendation of Head of the Department, the Subject Clerk in personnel file handling, prepares the present salary document to send to the Salary and Loan Division.

Table 02, shows the time taken at each station of the existing increment form process. The names of the five stations, from which the data were obtained, according to the personnel file, fills the increment form, fills in the leave record, fills in the leave record, the Head/ non- academic establishment checks and signs, respective department fills the performance of employee and then prepares the present salary scale in the Non - Academic Branch to be sent to the salary division. The time is taken by each station in respective years and mean time indicated in Table 02.

Table 03: The Salary Increment document transportation time

Description	Year			Total	Average Time
	2017	2018	2019		
Number of Increment forms	695	725	742		
Employee to first point	695x2min ¹ 1390 min 23.1 hours	725x2min 1450 min 24.1 hours	742x2min 1484 min 24.7 hours	4324 min 72 hours	1441 min 24 hours
Employee to second point	695x3min ² 2085 min 34.75 hours	725x3min 2175 min 36.25 hours	742x3 min 2226 min 37.1 hours	6486 min 108 hours	2162 min 36 hours
Employee to third point	695x300 min ³ 208500 min 3475 hours	725x 300 min 217500 min 3625 hours	742x300min 222600 min 3710 hours	648600 min 10810 hours	216200 min 3603 hours
Employee to fourth point	695x30 min ⁴ 20850 min 347.5	725x30 min 21750 362.5 hours	742x30min 22260 min 371 hours	64860 min 1081 hours	21620 min 360.3 hours
Employee to fifth point	695x300 min ⁵ 208500 min 3475 hours	725x 300 min 217500 min 3625 hours	742x300min 222600 min 3710 hours	648600 min 10810 hours	216200 min 3603 hours
Employee to sixth point	695x300 min ⁶ 208500 min 3475 hours	725x 300 min 217500 min 3625 hours	742x300min 222600 min 3710 hours	648600 min 10810 hours	216200 min 3603 hours
Total	649825 min 10830 hours	677875 min 11297.9 hours	693770min 11562.8 hours	2021470 min 33691 hours	673823 min 11230 hours

2min¹ – This time includes the Personal file Subject Clerk sending the salary Increment document to the Leave Clerk

3min²- This time includes sending the salary increment document to the Head of Department/ Non-Academic to check and sign.

300 min³ – This time includes, sending the salary increment document to the relevant department. The mail operates twice per day (at 9.30 a.m. and 2.30 p.m.).

30 min⁴ – Relevant Department Subject Clerk enters the document and then sends to the Head/ Relevant Department.

300 min⁵ – This time includes, after the recommendation, the relevant department sending the increment document to the non-academic establishments division.

300 min⁶– This time includes, after finishing all the documentation work, sending the present salary step to the salary and loan division.

Table 03, shows the time taken for transportation in the existing Increment form process. There are six transportation gaps. The average time taken for transportation in each gap shows 24 hours, 36 hours, 3603 hours, 360.3 hours, 3603 hours, and 3603 hours respectively.

After the observations and the discussions held with the employees, the time was carefully measured using a stopwatch.



Figure 01: The Existing Process of preparing Increment process of the Non - Academic Staff

Figure 01 illustrates the process of the increment form transportation of the existing IFP of the University of Kelaniya. According to the University Establishments Code, employees are eligible for annual increment. The employee has to complete satisfactory performance within one year in the relevant department. After the recommendation of the relevant Head of the department, the Head/ Non-Academic Establishments division puts the present salary step.

Table 04 - The Total Average Transportation and Process Time and Cost

Cost Components	The Average measurement	Hours	Value
The No of Increment forms	720		
Process Time	55209.1 min	912.9 hours	912.6x180*=Rs. 164268.00
Transportation time	673823 min	11230 hours	11230x180*=Rs. 2021400.00
Total			Rs. 2,185,668.00

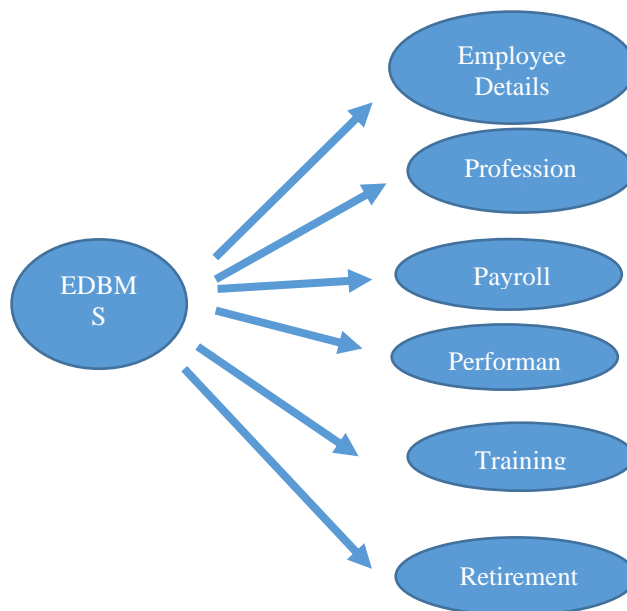
Proposed System

The Proposed system can eliminate all the difficulties of the existing manual process. The every datum of employee is classified into sub categories to facilitate the quick searching of information. This system shall be responsible for handling all the information like employee details, professional details, payroll details, performance details, training details and retirement details etc. The Management can quickly access important information like email ID, contact number, appointment dates, etc. The main features in the proposed system are user friendliness, security, portability and speed. The main advantage is the saving of cost and time.

Table 05 - The Average Measurements: for Proposed Increment form process Management Map

Cost Components	The average Measurement	Hours	Value (LKR)
No of Increment forms	720	-	-
The Increment form auto generated through the system and is sent to the Head of the Department	720x1 min 720 min	12 hours	180x12 Rs. 2160.00
Send the document to the relevant department to get the recommendation	720x5min 3600min	60 hours	180x60 Rs. 10800.00
After recommendation the Increment form is sent to the Head/ Non Academic for approval	720x1 min 720 min	12 hours	180x12 Rs. 2160.00
After that, the new salary step is sent to the salary and loan division	720x1 min 720 min	12 hours	180x12 Rs. 2160.00
Total			Rs.17280.00

Source: Observation Data, 2019.

Figure 02: The proposed details of the automated system of the Non- Academic staff

Conclusion

Finally, the system is timely useful for all the non-academic staff in the university system to get the information without any effort, because all the information has been generated by the system. Going paperless has many advantages. Some of them are increased efficiency, saving of paper and printing cost, time savings, storage cost savings, environmental benefits, efficient file retrieval, and enhanced customer service.(Litalien et al., 2009)

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I thank all the non - academic employees of the non-academic establishments division at the University of Kelaniya, who cooperated with me to conduct this study. Mr WM Karunarathna, the Registrar of the University of Kelaniya, encouraged the study by giving approval without any delay to collect the necessary data.

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Assessment of the State of Quality in garments applying Data mining mechanisms: A Case Study in the Apparel Industry

Basnayake, B. R. P. M.¹, Hewaarachchi, A. P.² and Chandrasekara, N. V.³

Forecasting the quality of sewed garments is an important area in the apparel industry. This paper consists of a case study relevant to a high-ranking apparel manufacturing plant in Sri Lanka. Quality is measured using the First Time Through (FTT) state which is a measure of production competence and capacity. The factory capacity is to afford the FTT 98% or above as a high state category. The low state is consisted of FTT of less than 98%. Recently Data mining methods are used to extract insights from data and to make fast decisions. The main objective of the study is to identify the better model to predict the FTT state with data mining mechanisms. Classification tree and Probabilistic Neural Network (PNN) models were used to forecast the FTT state with the under-sampling method due to the matter of class imbalance in the original dataset. True positive (TP), False-positive (FP), precision, recall, accuracy and F-measure were used as the performance measurements. FP rate was zero and precision was one in the classification tree. While the FP rate was 0.0649 and precision was 0.9348 in the PNN model. Both models had a high F-measure value of 0.9745 and 0.9287 respectively. Therefore, two models can be used in prediction with better performance measurements. Outcomes of the study will help to find out the optimum allocation of a style to a relevant team to achieve the highest FTT state, to recognize the training requirements of the employees and to improve the satisfaction of the customer.

Keywords: *Apparel, Decision Tree, First Time Through State, F-measure, Probabilistic Neural Network.*

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¹ Department of Statistics & Computer Science, Faculty of Science, University of Kelaniya, Sri Lanka. (pavithramalkibasnayake@gmail.com)

² Department of Statistics & Computer Science, Faculty of Science, University of Kelaniya, Sri Lanka. (anuradhah@kln.ac.lk)

³ Department of Statistics & Computer Science, Faculty of Science, University of Kelaniya, Sri Lanka. (nvchandrasekara@kln.ac.lk)

Introduction

Quality for the textile industry is defined as a measurement concerning the acceptable level of materials. It is a vital sector from the inspection of raw materials to the final inspection of goods (Kurniati et al., 2015). As a leading apparel solutions provider in Sri Lanka, the company in the study affords inspired solutions to famous brands across the world. This apparel company is a manufacturing plant relevant to products like thongs, briefs, boxers and camisoles. The quality of the finished good is measured using the First Time Through (FTT) state value for a top brand. Each brand is consisted of common types of operating activities for each type of garment. In addition, the same style runs in a team at least a week. However, other brands are complex due to critical activities and a variety of garments. Those brands do not have a long run in a team due to small quantities ordered by buyers. FTT is a measure of production competence and capacity. It is a percentage of the number of units without defects against the total units produced in a production process as illustrated in Equation 1. The factory capacity is to afford the FTT 98% or above as a high state category. The low state is consisted of daily FTT of less than 98%.

$$\text{FTT Percentage} = \frac{\text{Daily Production} - \text{Number of reworks per the day}}{\text{Daily Production}} * 100\% \quad (1)$$

The work floor consists of 60 teams assigned with a style and 24 Machine Operators. The factors that affect the FTT state which are independent variables for the selected top brand were 60 teams, 9 garments, 19 sawing activities, 51 types of reworks, daily production and the total number of reworks. Every quality checker in a team maintained a document known as an End-line rework report. For the relevant operation activity in the style, each defect type was marked with the coded letter. They were noted and the sum of all defects was used to calculate daily FTT state relevant to the daily production. All the 51 types of damages were listed down in the Defect type sewing document.

The main perspective of the Quality Department in the factory is to maintain the quality level in the high state category by avoiding the sawing damages. In addition, they need to identify the skills of the sawing operators to allocate them for the necessary improvements or teams in the factory. Therefore, it is important to assess the quality of the products to identify whether the final finished garments will be in the high or low state category. Here, the classification problem deals with the categorization of data into predetermined classes.

The main purpose of the study is to build suitable models using data mining methods for the classification problem. Then to select the better model to forecast the states of FTT. The results of the study mainly benefit as an indicator to identify the optimum allocation of a team to a style that is the garment type of the top brand to achieve the highest FTT state. In addition to recognizing the training requirements of the employees in the low state category, also need to improve the satisfaction of the customer by improving the state of the quality in garments.

Literature Review

Quality has many implications and indications. Sizwe and Charles (2017) stated quality should be maintained for all the resources in a garment such as machines, accuracy in measurements, fabric, storage and labor skills. In 2018, Choudhary et al. described the sewing defects in garment production and analyzed them for the optimum selection of parameters and to minimize faults. They have found that the sewing damages such as needle cut and other sewing defects were mostly in woven fabric. The sewing damage problem did not have a direct solution which is capable of removing the damages in fabric. The affecting parameters related to fiber and sewing machines must be examined to design appropriate remedial measurements related to machine design. Different studies had been done based on the quality and production efficiency in the apparel sector. However, still a few types of research had been conducted about the FTT. In the study of Mohan et al. (2012), First Pass Yield (FPY) was used and reduced the defect rate of a product with Pareto analysis, cause and effect diagram. It concluded the statistical process control approach is an effective means for controlling and improving the process quality. Uddin et al. (2014) reduced defects in the sewing division of a garment factory

using Define, Measure, Analyze, Improve and Control (DMAIC) methodology of six sigma. The objective of their study was to reduce the number of defects to a minimum level whereas to reduce production cost and increase quality and productivity. Quality was measured based on the output of the process. The Pareto analysis and cause and effect diagram were used in the analysis. The Pareto analysis was used to identify the major defects and then cause and effect diagrams were used for the identified defects.

Other than the traditional statistical methods, different studies were conducted using the data mining techniques. In the year 1994, Goebel applied the Probabilistic Neural Network (PNN) technique to monitor and diagnose tool wear in manufacturing milling machines as the quality products increased in demand for automated manufacturing systems. PNN model was advantageous as it allowed the use of exigent probabilistic analysis with Bayes optimal classification. To measure the sewing performance of the fabric, Hui et al. (2007) used Artificial Neural Network (ANN) with the backpropagation algorithm and trained the ANN model with 10 000 iterations and converged to the minimum error. The inputs used were the physical and mechanical characteristics of the fabric. The outputs were the control levels of sewing performance. They were puckering, needle damages, hoax and overfeeding. A validation set was used to identify the accuracy and effectiveness of the neural network model. The prediction accuracy was high with a value of 93%. Hsu and Wang (2005) used the decision tree to recognize the sizes of pants of soldiers by classifying the important patterns in shapes of the body and it was advantageous for effective production. The study of Jain and Kumar (2020) built a classification model using Naïve Bayes, Random Forest, Bayesian Forest and Decision trees to forecast the garment types (lower, upper, whole-body) and subtypes (blouse, dress, and etc.). They stated that the random forest method had a high accuracy compared to other techniques as it controlled the unbalanced data and created a huge number of trees that were uncorrelated. Xing et al. (2019) suggested principal component analysis with PNN to cluster the shapes of the human body in a garment factory which was a more accurate model.

Methodology

Data were gathered for months January, February and March in 2019 from the report, End-line rework provided by the quality checkers. In the dataset, there were no missing values. Randomly selected 80% of the data were used to train the model and the remaining 20% to test the model. Initially, descriptive analysis and cross-tabulations were conducted to identify the basic features of the data, compare and analyze the relationship between variables.

Association tests

Pearson correlation coefficient (r) is a measure of the linear correlation of two variables as in equation 2. In the study, r is used to identify the strength of the linear relationship between variables. Through the Cauchy – Schwarz inequality, it has a range between positive one and a negative one. A strong positive linear correlation has a value close to a positive one and zero detect no linear correlation. Negative one implies a strong negative linear correlation.

$$r_{xy} = \frac{\sum_{i=1}^n x_i y_i - \sum_{i=1}^n x_i \sum_{i=1}^n y_i}{\sqrt{n \sum_{i=1}^n x_i^2 - (\sum_{i=1}^n x_i)^2} \sqrt{n \sum_{i=1}^n y_i^2 - (\sum_{i=1}^n y_i)^2}} \quad (2)$$

The Chi-Square test of independence is a non-parametric test used to determine a significant relationship between two categorical variables.

The hypothesis of the Chi-Square test is as follows:

H_0 : There is no significant relationship between the two categorical variables.

H_1 : There is a significant relationship between the two categorical variables.

The acceptance or rejection of the null hypothesis depends on the Chi-Square statistic and the critical value from the Chi-Square distribution.

Classification tree

A decision tree is a data mining algorithm with a tree-like structure of the root node at the first. The classification tree attempts to predict the values of a categorical dependent variable from one or more continuous or categorical variables. The best attribute is identified using a top-down induction algorithm by splitting the learning sample and proceed until each observation is correctly identified. Gini impurity measure in equation 3 is used to identify how well the two or more classes are separated.

$$\text{Gini impurity measure} = \sum P(i) * (1 - p(i)) \quad (3)$$

Where P(i) is the probability of a given classification i.

Probabilistic Neural Network (PNN)

Probabilistic neural networks are used in classification problems. It consists of four layers in the network architecture. The Input Layer consists of one neuron for each predictor variable. The next layer, the pattern layer contains one neuron for each observation in the training data set. The neuron garners the value of the predictor variables with the target value. When presents with the input values from the input layer, a neuron in the pattern layer calculate the Euclidean distance of the test case from the neurons' center point. Then concerns the radial basis function kernel. After-wards the value is passed to the summation level which is the third layer. There is one neuron for each category of the target variable. The actual target category of each training case is stored with each pattern neuron. The weighted values of pattern neurons are furnishing to the summation neuron relevant to the pattern neuron's category. The summation neurons add the value for the class they represented. Then the decision layer assesses the weighted votes for each target category and uses the largest vote to prognosticate the target category.

The spread parameter is a benefit for the maximum classification accuracy of classes. When the parameter value is close to zero that indicates the performance of the network is based on the imminent neighbor classifier. While for large spread values it considers various close neighbor classifiers.

Confusion matrix

A confusion matrix is precise of prediction outcomes on a classification problem as indicated in Table 1. The number of correct and incorrect predictions are precise with count values respect to each class.

Table 1: Confusion matrix

	Class 1 Predicted	Class 2 Predicted	Row Total
Class1 Actual	TP	FN	P
Class 2 Actual	FP	TN	N

Positive (P) is the total observations from True Positive (TP) and False Negative (FN) whereas Negative (N) indicates the total in False Positive (FP) and True Negative (TN). TP observation is positive and predicted to the same. While FN occurs when the observation is positive but predicted as negative. TN takes place when the observation is negative and predicted to be negative. FP comes out when the observation is negative but is predicted positive.

Performance measurements are FP rate, TP rate, accuracy, recall, precision and F-measure. FP rate is the FP over negatives while the TP rate is the TP over positives. Accuracy is the ratio of the total number of correctly classified positives and negatives divide into the total positives and negatives as illustrated in Equation 4:

$$\text{Accuracy} = \frac{TP+TN}{TP+TN+FP+FN} \quad (4)$$

Equation 5 contains the recall where it is defined as the ratio of the total number of correctly classified positives over the total number of positives. High Recall indicates the class is correctly recognized.

$$\text{Recall} = \frac{TP}{TP+FN} \quad (5)$$

To calculate the value of precision, the total number of correctly classified positive is divided by the total number of predicted positive. High Precision denotes labeled as positive is truly positive. Precision calculation is exhibited in Equation 6:

$$\text{Precision} = \frac{TP}{TP+FP} \quad (6)$$

High recall, low precision indicates most of the positives are correctly recognized but there are a lot of false positives. **Low recall, high precision** shows missing of positives but predicted as positive are indeed positive.

As mentioned in Equation 7, F-measure uses two measures, precision and recall to have a measurement that represents both of them.

$$F - \text{measure} = \frac{2 * \text{recall} * \text{precision}}{\text{recall} + \text{precision}} \quad (7)$$

Class imbalance problem

Imbalanced class is a common problem in real-world classification problems where there are unbalanced ratios of observations among the classes. In this study, the under-sampling method was used as it is easy to work with the majority class. It reduces the number of observations from the majority class to make the data balanced. This method is more appropriate to use when the data set is huge and reducing the size of the training sample contributes to improving run time and storage matters.

Findings

This section explains the basic features of the dataset, results of the classification trees and the PNN models with the class-imbalance and after reducing the problem of class-imbalance.

Descriptive analysis

The two state high and low is categorized based on the factory standard. They aim to maintain the FTT equal or above 98% as the state high.

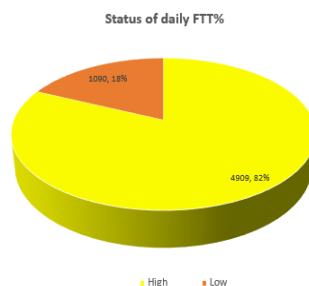


Fig1: Pie chart of the daily FTT State

According to Figure 1, 82% of the data belongs to the state high category. Only 12% of the data belongs to the low category. These results illustrate the presence of class imbalance problem in the dataset under the study.

The bar chart in Figure 2 indicated the garment Thong had the highest frequency of 1592 that sewed in the factory within the considered three months.

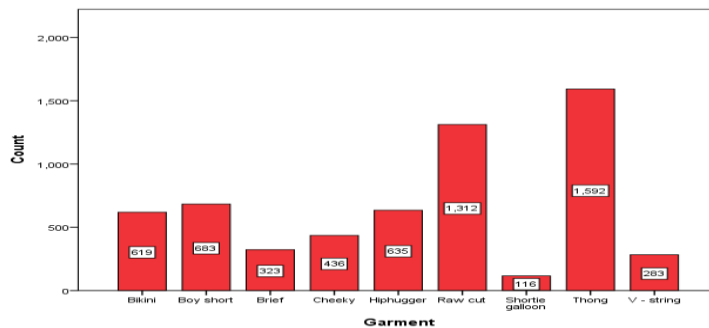


Fig 2: Bar chart of the Garments

By referring to the cross-tabulation between FTT state and garments, it was identified that the raw cut was sewed with the highest frequency for the state high while for the low state thong garments were sewed with the highest frequency. Through the cross-tabulation between state and damage type high-low was the most affected damage type for the state high with the highest frequency. For the low state, the highest influence was from the measurement out damage type.

The correlation between the total number of damages and the daily output was -0.0276 and it implies a weak negative correlation. The correlation between the team and the total number of damages was a weak positive correlation with a value of +0.0949. The correlation between the team and the daily output was +0.0194. Daily output and team had a weak positive correlation. The chi-square test of independence implied all the p values were smaller than 0.05. Therefore, reject H_0 at 5% level of significance and consider there were associations between variables operating activities, garments and rework types.

Classification tree

By referring to the built classification tree, the root was the 'number of reworks' with the predicate value 28.5 in the classification tree. In the next level 'daily production' was in the decision nodes. In later splitting, 'types of reworks', 'garments' and 'operation activities' were used in the decision tree as decision nodes. An important fact was the input variable, 'team' was not in the built decision tree. To check the accuracy of the model, the confusion matrix was built as follows.

$$C = \begin{bmatrix} 972 & 7 \\ 5 & 216 \end{bmatrix} \quad (8)$$

The above confusion matrix illustrates that there were seven records that belong to the class high but predicted as the class low by the classification tree. At the same time, there were five records that belong to the class low but predicted as the class high.

Table 2: Performance measurements of the classification tree

Performance measurement	Rate
FP rate	0.0463
TP rate	0.9949
Precision	0.9899
Recall	0.9949
Accuracy	0.9875
F measure	0.9925

Table 2 consists of performance measures associated with the classification tree. The FP rate was 0.0463 which was a low value. Further, TP rate, precision, recall, accuracy and F measure values were close to one.

From the confusion matrix 8, TP records for the class high state was 972 while class low had 216 observations in TN. This indicates the problem of class imbalance as the majority of the observations belong to the TP.

Classification tree with under-sampling technique

Under-sampling involved the removal of some of the data in majority class which was from the high state category, to result in a balanced distribution with class low.

Randomly selected 80% of the data were used to build the tree after applying the under-sampling technique where 5999 observations in the original dataset have been reduced to 2321 data points. In the classification tree, the root had the same attribute as the 'number of reworks' with the predicate value changed to 20.5 compared to the original classification tree. In the next level 'daily production' was in the decision nodes. In later splitting 'types of reworks', 'garments' and 'operation activities' were used in the decision tree as decision nodes. An important indication is that, the input variable, 'team' was not in the built decision tree as a node. The model accuracy was evaluated using the following confusion matrix:

$$C = \begin{bmatrix} 210 & 0 \\ 11 & 243 \end{bmatrix} \quad (9)$$

The class imbalance problem has been reduced in the above confusion matrix compared to the confusion matrix in Equation 7. TP and TN values were 210 and 243 respectively. Table 3 exhibits that, the FP rate was zero while precision was one. But 11 values predicted as the class high which originally belongs to the class low. However, there were no values that predict as the class low which belongs to the class high.

Table 3: Performance measurements of the classification tree after applying the under-sampling technique

Performance measurement	Rate
FP rate	0
TP rate	0.9502
Precision	1
Recall	0.9502
Accuracy	0.9763
F measure	0.9745

Total positive rate, recall, accuracy, F measure values were close to one while the FP rate was zero.

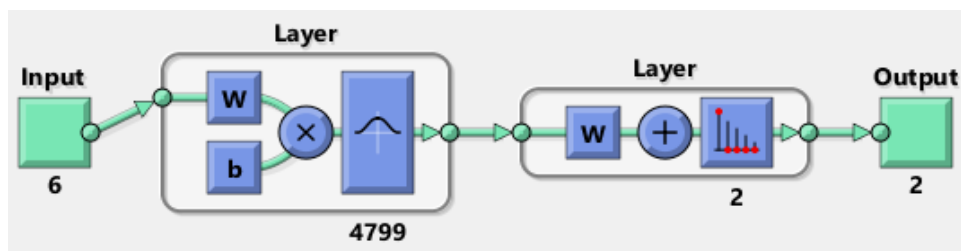
Probabilistic Neural Network (PNN)

In the PNN approach, the most suitable model was selected by adjusting the spread parameter from zero to one and the performance of PNN models with different values of spread parameter are displayed in Table 4.

Table 4: Performance of PNN with different spread values

Spread	TP	TN	FP	FN
0.1	989	9	202	0
0.5	969	134	77	20
0.7	967	159	52	22
0.8	966	162	49	23
0.85	966	165	46	23
0.9	966	165	46	21
1	965	167	44	24

With the increase in spread value, TP values were increased but reduced when the spread value is one. When increasing the spread values, FN increased and FP decreased. However, FN reduced at the spread value of 0.9. Therefore, the most suitable PNN model had 0.9 spread value that can be used in prediction as it consists of high TP and TN. Figure 3 illustrates the PNN model.

**Fig 3: PNN model**

The input layer contains neurons for each independent variable. First hidden layer, the pattern layer consists of 4799 hidden neurons which were equal to the number of observations in the training set. The second hidden layer, the summation layer consists of two hidden neurons with the weighted values relevant to the pattern neuron's category. The largest vote was given as the target category in the output layer.

PNN with under-sampling technique

To overcome the class imbalance problem, the under-sampling mechanism was applied to reduce the data with daily FTT state. The same process was carried out to select the best spread parameter as in Table 4 and the results are illustrated in Table 5.

Table 5: Performance of PNN with different spread values after applying the under-sampling technique

	TP	TN	FP	FN
0.1	233	18	213	18
0.5	218	198	33	15
0.7	215	213	18	18
0.75	215	214	17	18
0.8	215	216	15	18

0.85	215	216	15	18
0.9	215	216	15	18
1	214	219	12	19

When comparing spread values FP and FN were lower in the spread value of 0.8 or 0.9 with high TP and TN values. Therefore, the better performed model had a spread value between 0.8 and 0.9 that can be used in prediction. Therefore, selected model with the spread value 0.8 that (small predictive is more selective) used in prediction. Figure 4 exhibits the PNN model after the application of the under-sampling technique to the original data. First hidden layer reduced to 1857 hidden neurons which were equal to the number of inputs in the training set. The summation hidden layer consisted of two hidden neurons that were used to store the actual target category with the weighted vote for each state to the concerning observations.

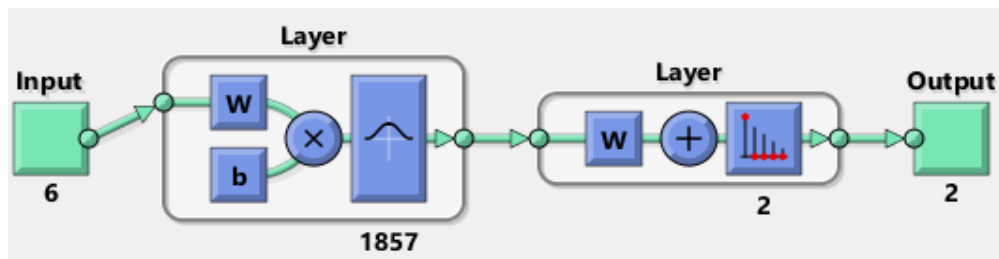


Fig 4: PNN model after application of the under-sampling technique

Table 6 illustrates the FP rate, TP rate, precision, recall, accuracy and F - measure before and after applying the under-sampling technique to PNN models.

Table 6: Performance measures of PNN models before and after applying the under-sampling technique

	Before under-sampling	After under-sampling
FP rate	0.2180	0.0649
TP rate	0.9767	0.9227
Precision	0.9545	0.9348
Recall	0.9767	0.9227
Accuracy	0.9425	0.9291
F measure	0.9655	0.9287

FP rate had decreased with the application of the under-sampling method from 0.218 to 0.0649. The TP rate, precision, recall, accuracy and F – measure were low in original data compared to data consider in the under-sampling technique.

Discussion and Recommendation

This work was carried out to predict the FTT states in an apparel garment with the data mining mechanisms. It was indicated from the cross-tabulation between the state and damage type, the high–low affected for the state high with the highest frequency. In the manufacturing process, the high-low damage type occurred due to the unbalanced sawing operations in the panels. This may be due to the

improper training of the machine operator, failure in the machine, or due to the nature of the fabric. Therefore, special attention should be given to reduce the defect. In addition, measurement out was the damage type with the highest frequency in the low state. Dimensional matters are due to the incorrect patterns, cutting problems, incorrect sawing by the machine operator. The entire quantity was affected due to this damage type and it results in a production loss with a waste of time. If the correct measurements are properly given by the technicians to the relevant machine operators with an applicable measurement document, it can affect the quality positively.

There was no effect from the variable, 'team' for the daily FTT state. It was conspicuous the process in a team was covered through all other independent variables. The variables, the 'number of reworks' and 'daily production' directly affected in the classification trees. By Equation 1 it was articulated, as the FTT state was calculated with those variables.

Table 7: Performance measures of PNN models and classification trees before and after applying the under-sampling technique

	Classification trees		PNN	
	Before under-sampling	After under-sampling	Before under-sampling	After under-sampling
FP rate	0.0463	0	0.2180	0.0649
TP rate	0.9949	0.9502	0.9767	0.9227
Precision	0.9899	1	0.9545	0.9348
Recall	0.9949	0.9502	0.9767	0.9227
Accuracy	0.9875	0.9763	0.9425	0.9291
F-measure	0.9925	0.9745	0.9655	0.9287

Comparing the models in Table 7, the FP rate was zero in the classification tree with the under-sampling technique and it had the highest precision of one. Accuracy, F measure and recall were close to one in this tree. FP rate was high before applying under-sampling in the PNN model. However, due to the class imbalance problem, when comparing the models after under-sampling, classification tree performance measurements are better than PNN model performance. Therefore, the better model to predict the state of quality of the garments is the classification tree with the under-sampling technique than the PNN model. However, the models discussed with the under-sampling method can be used in prediction due to high accuracy, recall and F-measure. Even though the classification tree and PNN models with class imbalance problem had high accuracy, the new data can predict the wrong state of daily FTT.

Different studies had been done based on quality and production efficiency in the apparel field as discussed in the literature review section. However, still very few researches had been conducted about the FPY (Mohan et al., 2012). This study will add more value to existing knowledge. There are different quality measuring tools used in each research. Some of them are control charts, Pareto analysis, fishbone diagrams which are traditional statistics techniques. In this study, different data mining classification techniques were applied and model performances were compared.

The expeditious advancement of the country's textile and garment industry has returned in Sri Lanka converting into Centre of the areal apparel. The major acquisition of industrialization is the increase in productivity. The result is the production of a huge manifold of products and services. This in return provides advanced standards of living for the whole society and the economy. The prediction of the quality state is a fascinating frame in the apparel industry. Indeed, it is very important to identify the quality state before assigning a process to a set of machine operators. An appropriate forecasting system is the best method to quantify quality. For example, if need to assign a style to a team can predict which team and group of people can sew the whole garment with high quality or the high state by assigning input variables to the above models. This is a saving to the garment as the number of reworks and issues arise in the future can be reduced before the work. Further to recognize

the training requirements of the employees as distinctive attention can be given to the teams with the low state category. A vital factor in the apparel industry is customer satisfaction. Through the high quality of the products can secure loyal customers, earn a high profit and can compete with the competitors.

Considering the limitations of this study, the data were not available for whole styles in the factory, daily FTT might not well represent the overall quality in the factory. Furthermore, there can be some other influential factors for daily FTT state which were not considered under the study. As an example, machine condition, maintenance and effect from departments like mechanical, industrial engineering, planning and cutting. In addition, data collection was done with the Endline Rework Report maintained by the quality checker. The respective daily FTT depends on the eye inspection of each quality checker.

For further improvements of the study the Naïve Bayes, Random Forest and Bayesian Forest methods can be applied (Jain and Kumar (2020)) and can compare the accuracy with the built classification trees and PNN models. If the study could be done to every brand within the garment with an additional long time period, it would provide many precise results on the study. At the same time, consideration of extra factors (Rahman and Amin, 2016) like Standard Minute value (time taken by workers to finish the garment) (Rahman et al., 2014), hourly targets and daily targets will improve the performance of the built models.

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Impact of Newspaper Reading on Performance of English Communication; An Experimental Study Based on ‘Daily News’ Paper

Nowzath, M. B.¹ and Riyath, M. I. M.²

The application of reading of newspapers based on selected reading strategies plays a major role in the performance of the students and the research was conducted to identify the relationship between the reading of ‘Daily News’ newspaper with reading strategies and the performance in the Business Communication subject in HNDA course of ATI – Section- Sammanthurai of SLIATE as there were no any previous researches in relation to this section in the academic field in SLIATE. Ninety students from HNDA – class – first year - A were taken for experimental group and ninety students from class - first year - B were taken for controlled group. A pre-test was conducted for both the groups and the mean differences were found to be negligible for both the groups from the pre-test. Later, the experimental group was instructed to read ‘Daily News’ newspaper based on selected reading strategies for three months with thirty hours reading while the controlled group was generally taught without the use of ‘Daily News’ newspaper. After three months a post-test was conducted for both the groups with different content. When the post-test was conducted, the mean was slightly improved for the group - B from the post-test and the mean was considerably improved for the group - A from the post-test. It was found that there is a positive relationship between the reading of ‘Daily News’ newspaper based on selected reading strategies and the performance in the Business Communication subject. Thus, if the students have to show improved performance in the Business Communication subject they need to read ‘Daily News’ newspaper with proper reading strategies consecutively.

Keywords: *Bottle Method, Business Communication, Circle Method, Polythene Method, Reading Strategies*

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¹ Department of English, Sri Lanka Institute of Advanced Technological Education (nowzathmnf@gmail.com)

² Department of Management and Business Studies, Faculty of Communication and Business Studies, Eastern University of Sri Lanka (riyathi@esn.ac.lk)

Introduction

The students' performance in the Business Communication through reading of newspapers with proper reading strategies is a topic in today's higher education. Not reading of newspapers with reading strategies is seen as one of the reasons for failure in the performance in the Business Communication subject in academic courses. Moreover, the presence of the new study methods based on technological learning requires a further analysis and discussion on the reading of newspapers. During the last decade, a number of studies have investigated the relationship between reading of newspaper and the performance in the Business Communication subject reaching to the conclusion that there exists a positive correlation between these two variables (Dabaghi & Akvan, 2014; Tarnopolsky, 2013; Tewksbury & Althaus, 2000), but there are no any researches in relation to the higher education at SLIATE. As per the gap, along with the direct investigation, this study aims at looking into the effect of the reading of "Daily News" newspaper with reading strategies in the performance in the Business Communication subject using data collected from Higher National Diploma in Accountancy course at ATI - Advanced Technological Institute – Sammanthurai Section in SLIATE under the Ministry of Ministry of City Planning, Water Supply and Higher Education in Sri Lanka.

Along with the direct investigation, the establishment of a correlation between the reading of 'Daily News' newspaper with reading strategies and the performance in the Business Communication subject would assist in applying different policies and it will have a wider effect in informing the policy makers in higher educational field. The historical background of "Daily News" newspaper, ways of developing English Language Communication Skills through newspapers, role of newspaper in promotional communication, discussion of reasons for EFL students to read English Newspaper and several ways to read them, Business Communication and HNDA programme in SLIATE are discussed here. The "Daily News" is an English-language newspaper in Sri Lanka. It is now published by the Associated Newspapers of Ceylon Limited (Lake House), a government-owned corporation. Weekday printings include the main section, containing news on national affairs, international affairs, business, political analysis, sports, editorials and opinions. Every Thursday issue a free supplement in a tabloid paper called "Wisdom". *Daily News* newspaper is printed with simple language with the use of business-related vocabularies in the business section. This feature of the newspaper enhances the chance to develop the business communication skills. The newspapers were comprehended as one of the greatest central resources of communication in our society before the arrival of the internet. EFL learners can gain various information regarding business news, political news, sports news, daily news and so on from newspapers. Learners are informed by the newspapers what is going on around them and neighborhood. Further, this newspaper opened ways to learners' lives with many serious pillars, investigation and valued articles on diverse principles worldwide. Learners cannot absorb much about diversity, possible jobs and information on catastrophes without newspapers.

Literature Review:

The main aim of this section is to review the related research, main findings of the research, selected areas of the research, selected studies of the groups in the research with their ages, selected limitations of the viewed research. Before opening any research study, it is meaningfully obligatory for the researcher to explore the previous research as it has to be included with theoretical empirical planning which have been done locally and internationally. Phillips and Clifton (2007) assess the relationship between the authentic news of business simulations and the performance of the students of the English language classes with text authenticity, task authenticity, pedagogical authenticity and learner authenticity among the

students in the particular classes with the usage of appraisal system with comparison. This study finds that there is a positive relationship between the authentic news of business simulations and the performance of the students of the English language classes with text authenticity, task authenticity, pedagogical authenticity and learner authenticity among the students in the particular classes. Tarnopolsky (2013) assesses the relationship between the reading-based integrated skills and the success of the performance of the class conditions with the availability of the framework of reading habit – knowledge acquisition for the second-year students in a university in Russia with pre-stage reading, reading stage and post-stage reading testing. This study finds that the suggested method seems not only realistic but undoubtedly one of the best for reaching wanted outcomes in teaching English where class time is restricted and where the aim is in cooperation to improve students' skills for reading professional literature and to cultivate the skills of listening speaking and writing in practiced circumstances. This method has certainly recognized its productivity in the real-world involvement of using it at methodical academia.

Tewksbury and Althaus (2000) empirically examines the relationship between the newspaper and online version reading habit of the students and knowledge acquisition of the students using the framework of reading habit – knowledge acquisition consisting of 42 students for newspapers and 42 students for online versions in America with the analytical methods of Exposure Control Check and Final Exposure Patterns including the methodology of Pre-test and post-test for readers. This study finds that there is a connection between these two variables as an actual consequence of changes in understanding experience, online news readers were less possible to remember having read national and political news topics that seemed in the *Times* newspaper and more likely to remember business and other news topics. Rozana (2001) experimentally examines the connection between reading magazines and vocabulary development using panel data study with 35 students of Certificate in Professional English course at Sri Lanka Youth Centre in Ampara. This study finds that reading magazines is found to have a small, but statistically significant, effect on vocabulary development of the students of Certificate in Professional English course at Sri Lanka Youth Centre.

Tarnopolsky (2013), examines the bond between the internet-newspapers and students English productive and receptive skills with two groups of students specializing in psychology at Alfred Nobel University, Dnipropetrovsk, Ukraine with 12 students aged 18-19, 6 females, 6 males, in the experimental group; 12 students aged 18-19, 6 females, 6 males, in the control group. Before the commencement of the work in the second year of studies, the students from both groups attained the B2 level in their General English as per the placement test. They were working with the same course book throughout the academic year. During their academic year, in the control group, unlike the experimental group, the internet-newspaper was not used and its tasks were not used in the teaching-learning process. This study finds a harmless learning potential of the internet-newspaper method suggested for educating noble beliefs among pupils and accelerating the progress of students' English productive and receptive skills for qualified communication. It also finds the potential of the style for generating students' confidence towards their professional communication in English.

Safana (2015) examines the relationship between loud reading of newspapers and spoken skill of the students of Higher National Diploma in English – Part Time at Sri Lanka Institute of Advanced Technological Education – Sammanthurai. This study provides direct evidence regarding the pure relationship between loud reading of newspapers and spoken skill. It appears that when students used newspapers for loud reading in the classes over the semester, their spoken skill with effective communication skill significantly increased. Dabaghi and Akvan (2014) examine the connection between the reading routine of the students and performance in humanities and science. Primarily, operative process quiz was utilized to

understand the intermediate level of students. The other instrument was reading comprehension text which was throughout the term by their professor and seven multiple choice questions connected to it. The cognitive and metacognitive questionnaires were also used.

It is outlined that Barnett (1986) has demonstrated that vocabulary is an important predictor of reading ability. Since fluent L1 readers develop such large recognition in vocabularies, researchers have asked how such vocabulary growth occurs and whether the same is possible for second language readers and it states that a number of studies have investigated the relationship between reading of newspaper and the performance in the Business Communication subject reaching to the conclusion that there exists a positive correlation between these two variables, but there are no any researches in relation to the higher education at SLIATE.

Methodology

The aims of the research were to identify the relationship between the reading of 'Daily News' newspaper with reading strategies and the performance in the Business Communication subject and to identify the most significant value relevant variable between the reading of 'Daily News' newspaper with reading strategies and the performance in the Business Communication subject. Two groups of students were randomly taken from HNDA course with the targeted subject of Business Communication from Advanced Technological Institute - Sammanthurai under SLIATE under the Ministry of Higher Education and Highways. Sample of ninety students from Higher National Diploma in Accountancy – class – first year - A were taken for experimental group and a sample of ninety students from Higher National Diploma in Accountancy – class – first year - B were taken for controlled group.

A pre-test was conducted for both the groups with the same reading comprehension question in Business Communication subject and the mean differences were tested. Later, the experimental group was instructed to read 'Daily News' based on reading strategies such as 'Bottle Method', 'Polythene Method' and 'Circle Method' for three months with thirty hours reading practices and the classes for the controlled group were conducted with usual reading practices such as skimming and scanning without 'Daily News' and its reading strategies.

After three months a post-test was conducted for both the groups with the same reading comprehension questions in Business Communication subject. The question paper was of same structure like pre-test paper but the content was different. When the pre-test was conducted for both the groups with the same reading comprehension questions in Business Communication subject, the mean differences statistically were tested.

Hypothesis

In order to accomplish the aim of this research the following hypotheses were developed.

H₀: There is no impact of reading of 'Daily News' newspaper with reading strategies on the performance in the Business Communication subject.

H₁: There is an impact of reading of 'Daily News' newspaper with reading strategies on the performance in the Business Communication subject.

Results and Discussion

The data analysis and findings bring out the representation of data which were collected through pre-test for experimental group, pre-test for controlled group, post-test for experimental group, and post-test for controlled group. In this analysis, significant p value and mean difference were mainly considered with the support of Statistic Package for Social Science – version 23. At this point, from the pre-test, the Table 1 shows that group A took the mean of the marks as 11.3889 with the standard deviation of 2.05920 and group B took the mean of the marks as 12.2333 with the standard deviation of 3.13032. The mean difference between Group A and B is -0.844 in the independent sample test. The t statistics is -1.138 and associated p value was as 0.064. It means that it is more than 0.05 and, therefore the null hypotheses is not rejected and it shows that the mean differences (- 0.84444) were found as to be negligible between the both the groups.

Table 1: Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean				
Pre-test	A	90	11.3889	2.05920	.21706				
	B	90	12.2333	3.13032	.32996				
Independent Samples Test (Pre-Test)									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	13.28	.000	-1.138	178	.064	-.8444	.3949	-1.6238	-.0650
Equal variances not assumed			-1.138	154	.064	-.8444	.3949	-1.6246	-.0642

The Table 2 shows paired sample t test of group – B (pre and post). The mean of the marks as 12.3111 with the standard deviation of 3.13961 in the post-test. The mean of the marks as 12.2333 with the standard deviation of 3.13032 in the Pre-test. The mean difference between pre and post-test of groups B is - 0.07778 and standard deviation is 3.6338 in the paired sample t test. The t statistics is -0.203 and associated p value was as 0.840. It means that it is more than 0.05 and, therefore the null hypotheses is not rejected and it shows that the mean differences were found as to be negligible between both the test and expound as there is no considerable improvement in the performance.

Table 2: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean			
group – B	PreTest	12.2333	90	3.13032	.32996			
	PostTest	12.3111	90	3.13961	.33094			
Paired Samples Test								
	Paired Differences				t	df	Sig. (2- tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower				Upper
PreTest - PostTest	-.077	3.638	.3835	-.8399	.6843	-.203	89	.840

The Table 3 shows paired sample t test of group – A (pre and post). The mean of the marks as 11.3889 with the standard deviation of 2.0592 in the pre-test. The mean of the marks as 14.2667 with the standard deviation of 1.9185 in the post-test. The mean difference between pre and post-test of groups A is – 2.877 and standard deviation is 1.8713 in the paired sample t test. The t statistics is -14.589 and associated p value was as 0.000. It means that it is less than critical alpha value 0.05 at 95% confidential level. Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is not rejected. It means that there is an impact of reading of ‘Daily News’ newspaper with reading strategies on the performance in the Business Communication subject as Tewksbury and Althaus (2000) empirically examined the relationship between the newspaper and online version reading habit of the students and knowledge acquisition of the students using the framework of reading habit – knowledge acquisition consisting of 42 students for newspapers and 42 students for online versions in America with the analytical methods of Exposure Control Check and Final Exposure Patterns including the methodology of Pre-test and post-test for readers and found that there is a connection between these two variables as an actual consequence of changes in understanding experience, online news readers were less possible to remember having read national and political news topics that seemed in the *Times* newspaper and more likely to remember business and other news topics.

Table 3: Paired Samples Statistics

		Mean	N	Std. Deviation		Std. Error Mean		
group – A	PreTest	11.3889	90	2.05920		.21706		
	PostTest	14.2667	90	1.91857		.20223		
Paired Samples Test								
	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
PreTest - PostTest	-2.877	1.871	.1972	-3.269	-2.4858	-14.589	89	.000

Conclusion

The students who read 'Daily News' newspaper with reading strategies, described in methodology section for three months with thirty hours of reading practices show an impact on the performance in the Business Communication subject when the students who read with usual reading practices such as skimming and scanning, described in methodology section do not show an impact on the performance in the Business Communication subject as Tarnopolsky (2013) investigated the rapport between the internet-assisted project newspapers and students English speaking, reading, listening, and writing skills with two academic groups of students majoring in psychology in their second year at Alfred Nobel University, Dnipropetrovsk, Ukraine steering the investigational study and this study found a harmless learning potential of the internet-assisted project newspaper approach proposed for cultivating good thoughts among students and quickening the growth of students' skills of speaking, listening, reading, and writing in English for qualified communication and it found the potential of the approach for creating student self-possessed in what concerned the expansion of their trained professional oral and written communication in English, which was right significant for finalizing that communication and for absolutely encouraging it.

This research presents experimental evidence for the relationship of reading of 'Daily News' based on reading strategies and the performance in the Business Communication subject. The evidence presented in this research will essentially increase the body of literature, definitely relating to research on reading of 'Daily News' newspaper based on reading strategies and the performance in the Business Communication subject. Further, the outcome of the research will make the learners deeply think of the usage of the newspapers in the classroom activities as it supports the learners' thought and oppose the thought of the learners as the findings will bring the real experience to the learners. When the learners are aware of the usefulness of the newspapers, the receptive skills and the productive skills of the learners will obtain an increase with the inclusion of standard level of listening, natural level of reading, accepted level of speaking and recognized level of writing.

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Self-Confidence and Cognitive Style among the Secondary School Students in Sri Lanka

Udayakumari, L. A. M. H. P.¹

This study was commenced to identify the self-confidence of secondary school students concerning cognitive style. Self-Confidence was the dependent variable and cognitive style (Integrated, Intuitive, Split, Systematic, and Undifferentiated) along with demographic variables i.e., gender (Male & Female) were the independent variables. The method of the study was a descriptive survey. The sample was 400 students studying in grade 11 selected through multi-stage random sampling technique. Cognitive Style Inventory (CSI) and Self-confidence inventory (PSCI) were used to collect the data and Two-Way ANOVA with the 5×2 factorial design was used to analyze data. Levene's Test of Homogeneity of Variance was applied to test the assumption of homogeneity of variance for ANOVA. The first and foremost effect of cognitive style and gender on the self-confidence of secondary school students was found to be significant. Further, the double interaction effect of cognitive style and gender on the self-confidence of secondary school students was also found to be significant. The outcomes of the study have a suggestion for school teachers that they have to plan their teaching accordingly by adopting active teaching methods, proper teaching strategies, tools, and by guiding students and encouraging them for their academic achievements and self-confidence. For this, guest lectures, workshops, and seminars can be organized for the students who are lagging behind the poor selection of cognitive style.

Keywords: *Cognitive Style, Gender, Secondary School Students, Self-Confidence*

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¹ B/ Viharagoda Vidyalaya, Welimada (hansaniliyadipita@yahoo.com)

Introduction

The behavior of human activities can be considered in three broader dimensions as cognition, affection, or conation. Cognition is the mental processes involved in gaining knowledge and comprehension. These cognitive processes include thinking, knowing, remembering, judging, and problem-solving. These are higher-level functions of the brain and encompass language, imagination, perception, and planning and the knowledge development among children and are also crucial for survival. To adapt to the changing environmental conditions, animals use techniques such as camouflage, speed, and so on. For providing quality and standard education, the instructor or the teacher must know the needs of the students; every child comes with some inner qualities and abilities and that differentiate the child from the others.

Every student applies various types of approaches for gaining and processing data which is often termed as “style of their own”. Such abilities are not formed by birth and are developed with the environmental factors. The bond between the characteristics of the learner and the content, method, and media of instruction support to make the teaching-learning process very effective. Numerous single features encourage the learning and performance in the academic context. The cognitive style of the learners too should be considered here. Cognitive style means the hypothetical construct which has been developed to describe the procedure of mediation between stimuli and the responses. (Messick, 1976, P.06) also describes the cognitive style as “organizing and processing information.” Recently it had been defined as “individual differences in processing that are fundamentally linked to a person’s cognitive style; they are a person’s preferred way of processing; they are partly fixed, relatively stable and possibly innate preferences” (Peterson, Rayner, & Armstrong, 2009, P.199-208). So, the researcher tends to study the cognitive styles and self-confidence of the students.

Literature Review

Cognitive Style refers to the features in which the individuals theoretically organize and manage the environment. The studies that explore the cognitive style concept concluded that students’ cognitive styles are stable characteristics (Riding & Pearson, 1994; Riding & Sadler-Smith, 1997), which links across various contexts and that it is not likely to change based on a specific learning platform. The following are some assumptions related to cognitive style.

- It is stable over time
- It is concerned with the form rather than the content of information processing
- It may be value differentiated (i.e. styles describe “different” rather than “better” thinking processes) (Sadler-Smith and Badger, 1998).
- It is a pervasive dimension that can be assessed using psychometric techniques
- it is bipolar

Previous information, socio-economic status, thinking, attitude, and intelligence, etc. are some factors that are affected by the cognitive styles. One of the most highlighted improvements in the education system can be seen from the amount of research done in the area of cognitive style which recognizes that the students in classrooms have vivid differences in their cognitive style. To this teaching and learning process, the instructors and learners need to understand better and appreciate these individual differences and how they affect the learning process. This is a continuous process. Understanding individual cognitive style preferences has significant implications for learners: it helps the students to be aware of their abilities, how they learn, themselves, why they differ from peers and how they think about the environment.

Further, it assists them in planning their learning and developing strategies that bridge with different learning environments to make learning more meaningful and effective. This awareness has positive psychological effects for learners and they can obtain self-esteem, motivation, and feel more confident about themselves (Sarasin, 2006). Many researches have been conducted on cognitive style with different variables. Pitta-Pantazi and Christou (2009) said that spatial-imagery cognitive style is related to originality, mathematical fluency, and flexibility. Kozhevnikov et al. (2002) highlights that visual-spatial imagery is very useful for mathematics and that spatial imagery is an important factor of high mathematical achievement in a students' life.

Navarro et al. (1999) said that field of independence style was related to achievement in arithmetic. Jantan (2014) spotted out that the positive correlation between students' cognitive styles and their mathematics achievement in the learning process. Singh (2015) found that there is no specific relationship between academic achievement in mathematics and hemispheric dominance. Rao (2014) analyzed that the highlighted differences in mean scores of mathematics achievement between the field-dependent and field-independent students. Jena (2013) examined the cognitive style of secondary school students in gender and stream. Singh (2017) highlighted that there is a specific bond between learning style, cognitive style, and academic achievement of secondary school students. Beri and Kumar (2016) inspected the cognitive style of secondary school students based on adversity quotient. Cognitive Style has a significant effect on mathematics. Parashar, Aggarwal (2013) identified that cognitive style plays a significant role in the self-confidence.

According to the review of literature, it shows that during the last two decades, a few researches have been done in the cognitive style learning in different contexts. Further, it reveals that researches in the field of self-confidence are also improving fast touching many new areas. These researches do not study the interaction effects of cognitive style and gender on self-confidence. This research work is an attempt to investigate the main and interaction effects of cognitive style and gender on the self-confidence of secondary school students in Sri Lanka. The following were the variables involved in the study.

Dependent Variable of the study was "Self-Confidence" and the independent variable was the Cognitive Style (Integrated style, Intuitive style, Split style, Systematic style and Undifferentiated style) and Gender (Male & Female).

Objectives of the study

- To examine the effect of (a) cognitive style and (b) gender on the self-confidence of school students.
- To find out the interaction effect of cognitive style and gender on the self-confidence of school students.

Hypotheses of the study

H₀₁: There exists no significant effect of (a) cognitive style and (b) gender on the self-confidence of school students.

H₀₂: There exists no significant interaction effect of cognitive style and gender on the self-confidence of school students.

Methods

A descriptive survey method was used for the study and a multistage random sampling technique was used to select the sample of 400 secondary school students from the Welimada Educational Zone. The sample was additionally categorized on the basis of their cognitive style and gender. The norms are given in manual the students who scored above 81 on systematic style and below on 61 on intuitive style were treated as systematic cognitive style. Accordingly, the students who scored below 61 on systematic style and above 81 on intuitive style were classified as intuitive cognitive style. Further, the students who scored above 81 on both the style; systematic and intuitive were considered as integrated cognitive styles. The students who scored on medium-high were categorized as “split-cognitive style”. The inventory included 60 statements under the main nine areas which pertain to study the self-confidence among the students. There is no time limit for the study. The nine areas of the inventory are (a) Social and Emotional Matureness (b) Intellectual Adequateness (c) satisfaction (d) Optimismness (e) Independentness (f) Self-Assuredness (g) Self-Feelingness (h) Evaluation about himself (I) Decisiveness.

The reliability of inventory was measured in two different ways, such as the Test-retest method and Split-half method. Reliability coefficients of the inventory were 0.89 and 0.88. The inventory, besides having high face validity, has sufficiently high validity with other similar inventories and allied measures by other authors. To measure the cognitive style of school students, Likert type five-point scale was used by the researcher. The 40 statements that pertain to study the five types of cognitive styles such as Integrated Style, Intuitive Style, Split Style, Systematic Style, and Undifferentiated Style of the students. Reliability coefficients for the inventory were determined by the Split-half method and the Test-retest method. The reliability coefficients of the inventory were 0.65 and 0.39. The correlation coefficients 0.262 reveals that CSI possesses a reasonable level of concurrent validity.

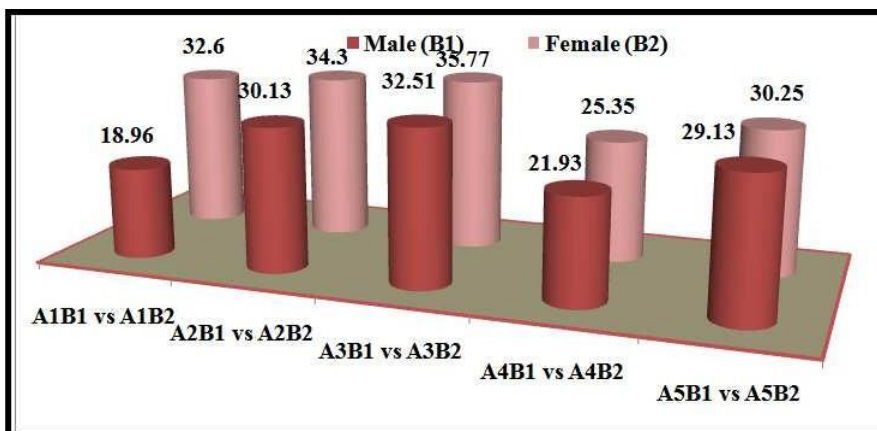
Descriptive Inferential statistics methods were used to analyze the data. Two - way ANOVA method with the 5×2 factorial design was computed using SPSS to examine the main effects of cognitive style and gender on the self-confidence of secondary school students. Levene's Test of Homogeneity of Variance was used to test the assumption of homogeneity of variance before applying Two-Way ANOVA. Wherever F-value was found significant, then t-test was applied for further investigation of the study.

Discussion and recommendations

The first and foremost objective of the current study was to find out the interaction effects of cognitive style and gender on the self-confidence of school students. The independent variables; cognitive style and gender were coded as A and B respectively and were varied into two ways as: Integrated Style (A1), Intuitive Style (A2), Split Style (A3), Systematic Style (A4) and Undifferentiated Style (A5) and Male (B1) & Female (B2). Means and SDs of different sub-samples have been presented in the Table-1 and Fig.1. The finding summary of ANOVA (5×2) has also been represented in Table - 2, which is analyzed in the main effects and interaction effects.

Table 1: Mean's and Standard Deviations of Sub-Samples of 5x2 Design for Cognitive Style and Gender of Students with Respect to Self-Confidence

Cognitive Style (A)	Gender (B)	N	Mean	SD
Integrated Style (A ₁)	Male (B ₁)	32	18.96	16.73
	Female (B ₂)	35	32.60	16.39
Intuitive Style (A ₂)	Male (B ₁)	29	30.13	16.12
	Female (B ₂)	33	34.30	18.41
Split Style (A ₃)	Male (B ₁)	43	32.51	14.01
	Female (B ₂)	44	35.77	16.66
Systematic Style (A ₄)	Male (B ₁)	31	21.93	16.57
	Female (B ₂)	31	25.35	19.55
Undifferentiated Style (A ₅)	Male (B ₁)	64	29.13	14.14
	Female (B ₂)	58	30.25	15.79

**Fig 1: Mean Scores of Sub Samples of 5x2 Design for Self-Confidence of Secondary School Students with respect to Cognitive Style and Gender****Table 2: Summary of Two-Way ANOVA (5x 2 Factorial Designs) For Self-confidence of secondary school students with respect to cognitive Style and Gender**

Sources of Variance	Df	Sum of Squares (SS)	Mean Sum of Squares (MSS)	F-Ratios
Main Effects				
A (Cognitive Style)	4	5434.682	1358.671	5.16**
B (Gender)	1	1863.930	1863.930	7.07**
Double Interaction Effects				
A×B Interaction	4	2687.570	671.892	2.55*

Between Cells	9	9276.171	263.320	.....
Within cells	390	102694.607	.....	.....
Total	399	.....	

* Significant at 0.05 level; **Significant at 0.01 level; NS = Not Significant

Main Effects of Cognitive Style and Gender on Self-Confidence of Secondary School Students Cognitive Style (A)

From the Table 2 that F-ratio (5.16) for the main effect of cognitive style on the self-confidence of school students is significant at 0.01 level that emphasizes the cognitive style has a noteworthy effect on the self-confidence of secondary school students in the Welimada Educational Zone. Therefore, the null hypothesis that was taken by the researcher; H01 (a), “There exist no significant effect of cognitive style on the self-confidence of secondary school students” is **not retained**. To investigate further, the ‘t’ -value has been given in the Table 3.

Table 3: ‘T’-Values for the Mean Scores of Self- Confidence of Secondary School Students with Respect to Cognitive Style

Integrated (A₁)	Systematic (A₄)	67	62	26.08	23.64	17.80	18.06	0.77 (NS)
Integrated (A₁)	Undifferentiated (A₅)	67	122	26.08	30.25	17.80	14.92	1.71 (NS)
Intuitive (A₂)	Split (A₃)	62	87	32.35	34.16	17.36	15.41	0.66 (NS)
Intuitive (A₂)	Systematic (A₄)	62	62	32.35	23.64	17.36	18.06	2.73**
Intuitive (A₂)	Undifferentiated (A₅)	62	122	32.35	30.25	17.36	14.92	0.85 (NS)
Split (A₃)	Systematic (A₄)	87	62	34.16	23.64	15.41	18.06	3.82**
Split (A₃)	Undifferentiated (A₅)	87	122	34.16	30.25	15.41	14.92	0.52 (NS)
Systematic (A₄)	Undifferentiated (A₅)	62	122	23.64	30.25	18.06	14.92	2.64**

Significant at 0.01 level; * Significant at 0.05 level; NS - Not significant

Note: Lower Mean Score Indicates Higher Self-Confidence Here as Directed in the Manual.

Table 3 defines that t-value (2.02) for students having integrated style and for students appropriating to intuitive style is significant at 0.05 levels. The mean scores for students Integrated style (26.08) were found to be higher self-confidence than the students with intuitive style. Further, it can be spotted out from Table - 3 that the students with integrated styles have higher self-confidence than the students having split styles in their academic performances. The t-value (0.77) vides Table - 3 indicates that there is no significant difference in self-confidence between students having integrated style and systematic style. When comparing the mean scores, it can be stated that students who were having an

integrated style reported lower self- confidence than students belonging to systematic style. This was one of the best findings in the study.

When we consider about the Table – 3, it discusses the mean scores of self-confidences of students having integrated style and students belonging to undifferentiated style do not have a difference. Yet the students who have integrated style possess significantly higher self-confidence than the students belonging to undifferentiated style in the context. Similarly, the t-value of (0.66) from Table 3 for students having intuitive style and for students having split style was not reported to be very significant at 0.01 level. Conversely, the t-value (2.73) from Table - 3 between the students having intuitive style and for students belonging systematic style is significantly highlighted at 0.01 levels. From the analysis of mean scores of the study, it can be decided that students having systematic style were found to possess significantly higher self-confidence than the students belonging to intuitive style.

As shown in Table 3 it can be simply observed by anyone that the mean scores of self-confidences of students in the school context were having intuitive style and for students having undifferentiated style do not differ significantly. Further, the students having undifferentiated styles have marginally higher self-confidence than their counterparts of the study. According to table 3, it highlights that students having split style and students having systematic style differ significantly about the self-confidence of the students. However, the students having split styles have significantly lower self-confidence than the students belonging to systematic style. The t-value (0.52) (from Table 3) for students belonging split style and students having undifferentiated style are found no significant at 0.01 level. Furthermore, it is portrayed in the same table that the t-value of (2.64) for students having systematic style and for students having undifferentiated style is found to be significant at 0.01 level and the final group is better than the former one concerning their self-confidence. In Figure 2, it has been illustrated that the mean for the main effect of cognitive style on self-confidence.

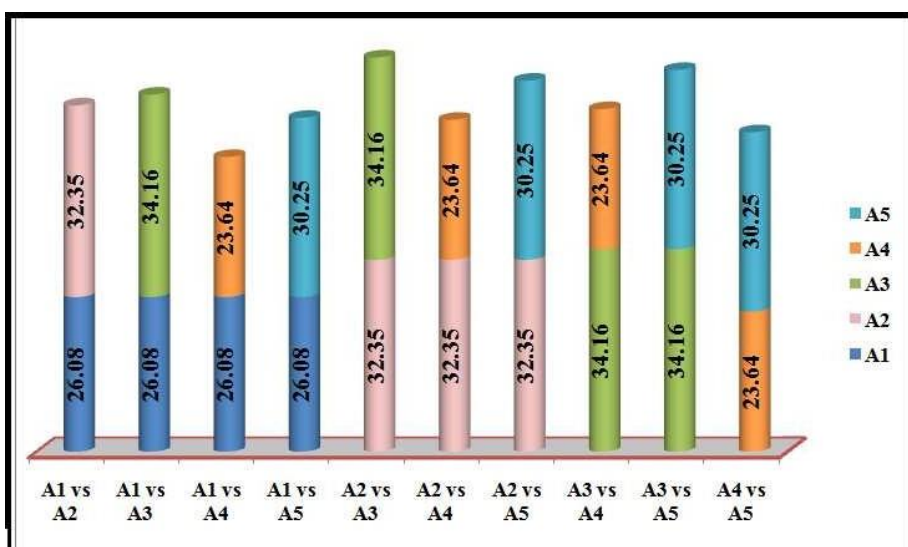


Figure 2: Main Effects of Cognitive Style on Self-Confidence of Secondary School Students (Mean Scores)

Gender (B)

The table 2 shows that the F-ratio of (7.07) for the main effect of gender on the self-confidence of school students is significant at 0.01 levels leading to the inference that gender has a significant main effect on the self-confidence of secondary school students. Thus, the null hypothesis H01 (b), “There exists no significant effect of gender on the self-confidence of secondary school students” is not retained. According to the study, Male students have high performance on self-confidence than female students in the school context.

Gender on Self- Confidence of and Double Interaction Effects of Cognitive Style Secondary School Students Cognitive Style (A) x Gender (B)

The table 2 highlights the double interaction effect between cognitive style and gender is (2.55) which is significant at 0.05 level leading to the inference that cognitive style and gender interact with each other in relation to the self-confidence of secondary school students in Welimada Educational Zone. Accordingly, the null hypothesis H02, “There exists no significant interaction effect of cognitive style and gender on the self-confidence of secondary school students” is not retained. It can be concluded that there is a momentous interaction effect of cognitive style and gender on the self-confidence of secondary school students. Further, it is subjected to t-test computation to find out the significant difference between the mean scores of self- confidences of different groups for cognitive style and gender. The results in table 4 confirm the above statement.

Table 4: ‘T’-Values for Mean Scores of Self-Confidence of Secondary School Students in Welimada Educational Zone for Different Groups of Cognitive Style (A) x Gender (B)

Sr. No.	Groups	N		Mean		SD		‘T’- Values
1.	A ₁ B ₁ vs.A ₁ B ₂	32	35	33.40	24.08	20.28	14.12	2.19*
2.	A ₁ B ₁ vs.A ₂ B ₁	32	29	33.40	25.89	20.28	17.26	1.54 (NS)
3.	A ₁ B ₁ vs. A ₂ B ₂	32	33	33.40	30.48	20.28	21.08	0.56 (NS)
4.	A ₁ B ₁ vs. A ₃ B ₁	32	43	33.40	25.55	20.28	11.38	2.12*
5.	A ₁ B ₁ vs. A ₃ B ₂	32	44	33.40	25.18	20.28	16.39	1.95 (NS)
6.	A ₁ B ₁ vs. A ₄ B ₁	32	31	33.40	24.61	20.28	12.06	2.08*
7.	A ₁ B ₁ vs. A ₄ B ₂	32	31	33.40	32.12	20.28	16.47	0.27 (NS)
8.	A ₁ B ₁ vs. A ₅ B ₁	32	64	33.40	29.34	20.28	16.80	1.04 (NS)
9.	A ₁ B ₁ vs. A ₅ B ₂	32	58	33.40	40.86	20.28	13.70	2.07*
10.	A ₁ B ₂ vs. A ₂ B ₁	35	29	24.08	25.89	14.12	17.26	0.46 (NS)
11.	A ₁ B ₂ vs. A ₂ B ₂	35	33	24.08	30.48	14.12	21.08	1.47 (NS)
12.	A ₁ B ₂ vs. A ₃ B ₁	35	43	24.08	25.55	14.12	11.38	0.51 (NS)

13.	A ₁ B ₂ vs. A ₃ B ₂	35	44	24.08	25.18	14.12	16.39	0.31 (NS)
14.	A ₁ B ₂ vs. A ₄ B ₁	35	31	24.08	24.61	14.12	12.06	0.16 (NS)
15.	A ₁ B ₂ vs. A ₄ B ₂	35	31	24.08	32.12	14.12	16.47	2.13*
16.	A ₁ B ₂ vs. A ₅ B ₁	35	64	24.08	29.34	14.12	16.80	1.57 (NS)
17.	A ₁ B ₂ vs. A ₅ B ₂	35	58	24.08	40.86	14.12	13.70	5.65**
18.	A ₂ B ₁ vs. A ₂ B ₂	29	33	25.89	30.48	17.26	21.08	0.93 (NS)
19.	A ₂ B ₁ vs. A ₃ B ₁	29	43	25.89	25.55	17.26	11.38	1.00 (NS)
20.	A ₂ B ₁ vs. A ₃ B ₂	29	44	25.89	25.18	17.26	16.39	0.17 (NS)
21.	A ₂ B ₁ vs. A ₄ B ₁	29	31	25.89	24.61	17.26	12.06	0.33 (NS)
22.	A ₂ B ₁ vs. A ₄ B ₂	29	31	25.89	32.12	17.26	16.47	1.43 (NS)
23.	A ₂ B ₁ vs. A ₅ B ₁	29	64	25.89	29.34	17.26	16.80	0.90 (NS)
24.	A ₂ B ₁ vs. A ₅ B ₂	29	58	25.89	40.86	17.26	13.70	4.39**
25.	A ₂ B ₂ vs. A ₃ B ₁	33	43	30.48	25.55	21.08	11.38	1.30 (NS)
26.	A ₂ B ₂ vs. A ₃ B ₂	33	44	30.48	25.18	21.08	16.39	1.24 (NS)
27.	A ₂ B ₂ vs. A ₄ B ₁	33	31	30.48	24.61	21.08	12.06	1.35 (NS)
28.	A ₂ B ₂ vs. A ₄ B ₂	33	31	30.48	32.12	21.08	16.47	0.34 (NS)
29.	A ₂ B ₂ vs. A ₅ B ₁	33	64	30.48	29.34	21.08	16.80	0.29 (NS)
30.	A ₂ B ₂ vs. A ₅ B ₂	33	58	30.48	40.86	21.08	13.70	2.84**
31.	A ₃ B ₁ vs. A ₃ B ₂	43	44	25.55	25.18	11.38	16.39	0.12 (NS)
32.	A ₃ B ₁ vs. A ₄ B ₁	43	31	25.55	24.61	11.38	12.06	0.34 (NS)
33.	A ₃ B ₁ vs. A ₄ B ₂	43	31	25.55	32.12	11.38	16.47	2.03*
34.	A ₃ B ₁ vs. A ₅ B ₁	43	64	25.55	29.34	11.38	16.80	1.29 (NS)
35.	A ₃ B ₁ vs. A ₅ B ₂	43	58	25.55	40.86	11.38	13.70	5.95**
36.	A ₃ B ₂ vs. A ₄ B ₁	44	31	25.18	24.61	16.39	12.06	0.16 (NS)
37.	A ₃ B ₂ vs. A ₄ B ₂	44	31	25.18	32.12	16.39	16.47	1.80 (NS)

38.	A ₃ B ₂ vs. A ₅ B ₁	44	64	25.18	29.34	16.39	16.80	1.27 (NS)
39.	A ₃ B ₂ vs. A ₅ B ₂	44	58	25.18	40.86	16.39	13.70	5.25**
40.	A ₄ B ₁ vs. A ₄ B ₂	31	31	24.61	32.12	12.06	16.47	2.04*
41.	A ₄ B ₁ vs. A ₅ B ₁	31	64	24.61	29.34	12.06	16.80	1.40 (NS)
42.	A ₄ B ₁ vs. A ₅ B ₂	31	58	24.61	40.86	12.06	13.70	5.54**
43.	A ₄ B ₂ vs. A ₅ B ₁	31	64	32.12	29.34	16.47	16.80	0.76 (NS)
44.	A ₄ B ₂ vs. A ₅ B ₂	31	58	32.12	40.86	16.47	13.70	2.66**
45.	A ₅ B ₁ vs. A ₅ B ₂	64	58	29.34	40.86	16.80	13.70	4.12**

Significant at 0.01 level; * Significant at 0.05 level; NS – Not significant A1: Integrated style A2: Intuitive style A3: Split style A4: Systematic style A5: Undifferentiated style; B1: Male B2: Female

Note: Lower mean score indicates higher self-confidence here as directed in the Manual.

The table 4 shows the t-value (2.19) for male students who own to integrated style (A1B1) and for female students belonging to integrated style (A1B2) is highly depicted at 0.05 levels. Therefore, it may be contingent from mean scores than female students having integrated style (A1B2) have a higher (24.08) self-confidence than the male students having an integrated style in a school. Male students having an integrated style (A1B1) and for male students having intuitive style (A2B1) do not differ significantly with respect to their self-confidence scores too. When comparing of mean scores, it can be deduced that male students having intuitive style (A2B1) have a higher self-confidence (25.89) than male students having integrated style (A1B1). In the same way, female students having intuitive style (A2B2) have significantly a higher self-confidence (30.48) than the male students having integrated style (A1B1). Conversely, t-value (2.12) table 4 for male students having integrated style (A1B1) is significant at 0.05 levels. An analysis of the mean scores makes it clear that male students having split style (A3B1) (20.28) possess higher self-confidence than that of male students having integrated style (A1B1). It can also be inferred that male students who have integrated style (A1B1) and female students who have split-style (A3B2) do not differ significantly with respect to self-confidence. This is also one of the great findings of this study.

The table 4 shows that t-value (2.08) for male students having integrated style (A1B1) and for male students having systematic style (A4B1) is significant at 0.05 levels. Moreover, from the mean scores, it explains that the male students belonging to systematic style (A4B1) possess significantly higher self-confidence (20.28) than the male students have integrated style (A1B1). The table 4 reveals that 't'-values for the groups namely A1B1 vs. A4B2, A1B1 vs. A5B1, A1B2 vs. A2B1, A1B2 vs. A2B2, A1B2 vs. A3B1, A1B2 vs. A3B2, A1B2 vs A4B1 were found to be non- significant while on comparison of mean scores, A1B2 possessed high self-confidence than their counterparts and t-value (2.07) for male students having integrated style (A1B1) and for female students having undifferentiated style (A5B2) differ significantly (33.40) high self-confidence than the former counterparts. Actually, a

significant difference was identified in self-confidence between female students having a systematic style (A4B2) and female students having integrated style (A1B2).

Further, the table 4 shows that the mean scores of self-confidences of female students having integrated style (A1B2) and for male students having undifferentiated style (A5B1) do not differ significantly in the studied context. However, the table 4 justifies that mean scores of self-confidences of female students having integrated style (A1B2) and for female students having undifferentiated style (A5B2) differ significantly and have significantly higher self-confidence than the previous one. The table 4 further examines the t-values for the groups namely A2B1 vs. A2B2, A2B1 vs. A3B1, A2B2 vs. A3B2, A2B1 vs. A4B1, A2B1 vs. A4B2, A2B1 vs. A5B1, A2B2 vs. A3B1, A2B2 vs. A3B2, A2B2 vs. A4B1, A2B2 vs. A4B2 and A2B2 vs. A5B1 were found to be non-significant while on comparison of mean scores A4B1 possessed high self-confidence than their counterparts in schools. It is also tangible from the table 4 that t-values 2.84 for female students having intuitive style (A2B2) and for female students having undifferentiated style (A5B2) is significant at 0.01 level directing to the implication that students of these groups in the selected schools differed significantly with respect to their self-confidence and from the mean scores, it can be concluded that female students having undifferentiated style (A5B2) have lower self-confidence than the female students having intuitive style (A2B2). From the t-value (0.12) given in Table – 4, it depicts that male students having split style (A3B1) and for female students having split style (A3B2) do not differ significantly with respect to their self-confidence. Therefore, the t-value (0.34) for male students having split style (A3B1) and for male students having systematic style (A4B1) is not significant which highlights that these groups do not differ significantly.

From the Table 4, the t-value (2.03) for male students having split style (A3B1) and for female students having systematic style (A4B2) is highly spotted out at 0.05 levels and also be concluded that male students with split style (A3B1) have significantly higher self-confidence (25.55) than female students with systematic style (A4B2). The t-values 1.29, 0.16, 1.80 and 1.27 vide table 4 for groups A3B1 vs. A5B1, A3B2 vs. A4B1, A3B2 vs. A4B2 and A3B2 vs. A5B1 were found to be non-significant at 0.01 levels leading to the inference that these groups do not have very specific differences, when the results were seen in the context of the mean scores A4B1 reported higher self-confidence as compared to their respective counterparts. Anyway, the t-value of (5.95) from Table – 4 for male students having split style (A3B1) and for female students having undifferentiated style (A5B2) is significant at 0.01 levels. When comparing mean scores, it can be inferred that male students having split style (A3B1) have significantly higher self-confidence than female students having undifferentiated style (A5B2). Par with this, it can also highly reflect that the table-4, t-value for (5.25) female students having split style (A3B2) and for female students having undifferentiated style (A5B2) differ significantly at Level. It can also be said that female students having split style (A3B2) significantly higher self-confidence than students having undifferentiated style (A5B2).

So, the t-value (2.04) for male students having systematic style (A4B1) and for female students having systematic style (A4B2) is found significant at 0.05 levels only. It also discovered that male students having systematic style (A4B1) are better than their counterparts with respect to their self-confidence and to this, t-value 1.40 vide table 4 for male secondary school students having systematic style (A4B1) and for male secondary school students having undifferentiated style (A5B1) do not differ. According to the facts revealed from the Table-4, t-value of (5.54) for male students having systematic style (A4B1) and for female students having undifferentiated style (A5B2) is significant at 0.01 levels and when those findings were compared in the context of mean scores, the self-

confidence for male students having systematic style (A4B1) was found to be higher than those with female students having undifferentiated style (A5B2). Anyway, the t-value 0.76 vide Table 4 for female students having systematic style (A4B2) and for male students having undifferentiated style (A5B1) is not significant at 0.01 level which represents that these two groups do not have much differences. It was found that male students having undifferentiated style (A5B1) possess high self-confidence than female students having systematic style (A4B2) according to the meaningful context.

The t-value of (2.66) indicated in the table 4 for female students having systematic style (A4B2) and for female students having undifferentiated style (A5B2) is significant at 0.01 levels leading to an inference that the two groups differ significantly and can get a clear idea about the mean scores than female students belonging to systematic style (A4B2) have significantly higher self-confidence as compared to female students having undifferentiated style (A5B2). In the same way, it explores that the t-value (4.12) for male students having undifferentiated style (A5B1) and for female students having undifferentiated style (A5B2) is found to be significant at 0.01 level leading to the conclusion that students of these groups differ significantly with respect to their self-confidence. On the other hand, the mean scores that inferred that male students having undifferentiated style (A5B1) have higher self-confidence than the female students having undifferentiated style (A5B2).

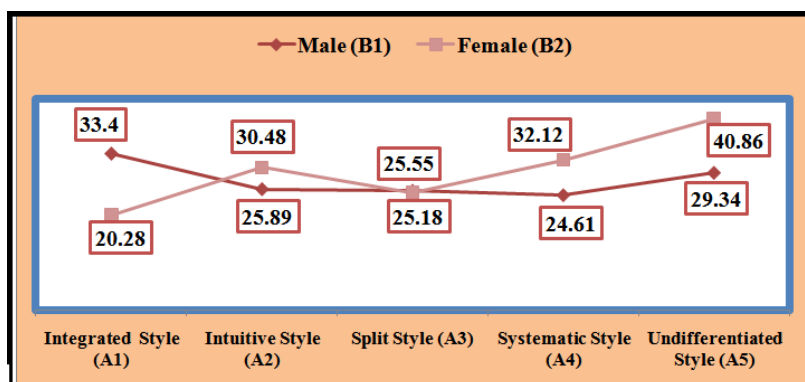


Figure 3: Interaction Effect of Cognitive Style (A) x Gender (B) on Self Confidence of secondary school students

The interaction effect of cognitive style (A) and gender (B) on the self-confidence of school students in the selected schools have also been represented in the form of the line graph in Fig.3. and in this figure, a 5x2 design interaction effect can be found. This leads to graphically when A1, A2, A3, A4, and A5 are marked on the X-axis at any distance; and on Y ordinate a scale is taken for the mean values. Since there are ten cells, the mean of each cell is used to plot out the points and the mean M11=33.40, M21=25.89, M31=25.55, M41=24.61 and M51=29.34 are marked to plotline B1. On par with, the means M12=24.08, M22= 30.48, M32=25.18, M42=32.12, and M52=40.86 are marked for plotting the line B2. The interaction effect is normally depicted by the set of non-parallel lines. The lines are non-parallel and it is presented in the graph. Hence, the line graph represents a generous interaction effect of the two variables; Cognitive style and gender on the self-confidence of secondary school students in the Welimada Educational Zone.

Conclusion

The study summarizes that the students with systematic cognitive style influenced significantly better self- confidence than the students who have intuitive cognitive style. This is the fact that students with a systematic cognitive style are more aware of their learning process in the school and these students are associated with logical and rational behavior changes and use well-defined step-by- step approaches on learning, thinking, acting, performing and the overall plan for problem-solving in their day-to-day life. It becomes one of the key factors of the success of the students' life. These students are keen on the strategies when, why, what, and how a certain strategy is to be adopted to the problem-solving procedure. However, this ability is lacking in the students with intuitive cognitive style. Teaching and learning strategies support and change the students' cognitive style. The teacher plays a vital role in supporting children to develop systematic cognitive styles among students in each and every context. This can be applied to any condition and situation. Teachers should simply identify the strong style patterns and the behavior of the students in their classes and utilize relevant approaches to accommodate the individual cognitive style preferences of the students. There should be a bridge between the curriculum designers and the teacher. That means the curriculum designers and classroom teachers have to understand the cognitive style preferences of the students in order to utilize relevant approaches to enhance meaningful learning in the classroom. So, it is a must to choose the needs and wants of the students and their priorities when understanding the cognitive styles of the students.

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A Study on Career Aspirations of Undergraduates in Sri Lanka

Ratnayake, R. M. C. S.¹ and Elvitigala, D. Y. C.²

Studying career aspiration among undergraduates has become an important topic since undergraduates face numerous challenges after completing their university degree especially when seeking for suitable employment opportunities. This study investigates the “career aspiration” in the context of current Sri Lankan Undergraduates, identify the factors that affect different career aspirations of undergraduates and the key issues faced by undergraduates regarding their career aspirations separately. To achieve the research objectives, the study was devised using descriptive qualitative approach. Data were collected from 50 undergraduates in 04 solitary universities as per the sample and from 03 graduates to conduct case studies based on their successful stories for validation purpose through semi structured interviews. The analysis of collected data is done by thematic analysis method by using NVivo 8 qualitative analysis software. The results of the study indicated that the subjective norms, perceived behavioral control and attitude are the factors which affect different career aspirations of the undergraduates in Sri Lanka. In most situations attitude had a positive relationship with the career aspiration, and it had an influence on other two constructs. Finally, key issues were identified as lack of experiences, competition, political changes, and lack of monetary facilities and all the respondents agree with the statement that the identified issues become great influence to career aspiration. This research is a significant source for the policy makers and decision makers in manipulating the university education system of the island and the universities can meaningfully contribute towards career development of undergraduates.

Keywords: *Career Aspiration, Attitudes, Social norms, Perceived behavioral control, Undergraduates*

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¹ Department of management Sciences, Uva Wellassa University, Sri Lanka
(sajalasachi@gmail.com)

² Project Assistant, Sri Jayawardhanapura University, Sri Lanka
(yasiruchamath2014@gmail.com)

Introduction

Background of the Study

Career aspiration is one construct of career development (Ismail et al. 2008) and it is defined as the individual's desire for the future employment (Powell & Butterfield 2002) that can be achieved if they work directly towards it (Ismail et. al 2008). Career aspiration is a good measurement of the success of a career, (Ismail et al 2008) that will be emerged through the influence of social context including values, norms, and beliefs (Ismail et al. 2008).

Education is a major determinant when measuring wealth, prosperity, and the development of the country. The main objective of higher education is to direct students to different careers (Ariyawansa, 2008). Sri Lankan universities main objective of education is "to give a higher education and expand the knowledge and intelligence" of the students (state council of Sri Lanka. 1942). According to Sri Lankan University Act No. 16, 1978 "university is established for the purpose of providing and promoting higher education". Universities are the institutions that provide higher education and university education is the core of higher education by giving both academic knowledge and professional training. According to Hommadi (1990) universities have duties such as conducting pure and applied research; protecting knowledge; exchanging knowledge; protecting the culture; solving social problems; public service; helping for modernization; training the students for academic and professional sectors; improving students' thinking skills, physical strength, control of emotional feelings, obey the requirements and enhance the brainpower; improve students' requirements such as food, accommodation, medical facilities, guidance and job opportunities.

In the Sri Lankan context higher education is to ensure the employability because society believes that university education is the most secured path for the employability. Therefore, there is a severe competition among students for the university entrance. However, they face numerous challenges after completing university degree especially when seeking for suitable employment opportunities.

Preliminary Survey

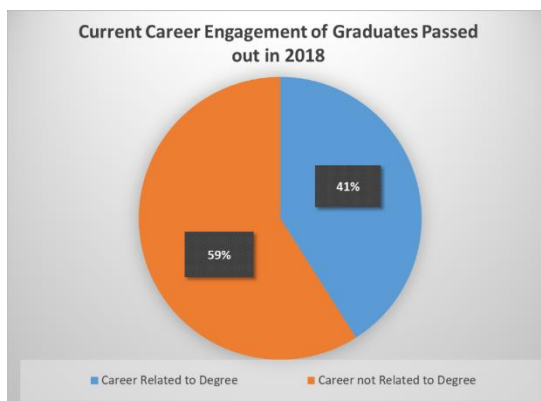


Figure 1-1: Current Career engagement of UWU graduates passed out in 2018

Source: Developed by the researcher based on referencing data in preliminary survey.

The study collected data from 30 Graduates, passed out in 2018 from Government Universities of Sri Lanka. These Graduates were attached to Faculty of Management, Faculty

of Science, Faculty of Agriculture, and Faculty of Arts. According to the findings of this preliminary survey 59 % of the Graduates are currently engaged in the careers which are not related to their studied Degree programme in the university & the remaining 41% of the Graduates do engaged in the careers which are being related to their degree programme.

Problem Statement

Sri Lanka has a considerable demand for graduates since they are the most important human capital of the country and they are expected to work in middle and top management positions in the industry (Ariyawansa 2008). However, some talented graduates must wait for a long time to be employed, especially when it comes to government jobs (Wickramarachchi, 2008). In most cases degree certificate is not enough to find a suitable employment due to the lack of self-confidence and other important skills (De Silva, 1977).

As cited by Hettige, Mayer, and Salih 2004 and Ibarguen 2005, Sri Lanka has consistently shown a clear preference for the government sector employment, relative to the private sector or the self-employment (Youth surveys 2004). The public opinion of the country is that the state universities are not producing graduates according to the requirements of the country (Ariyawansa, 2008).

Nearly thousands of undergraduates are passing out annually from universities and seeking for employment opportunities. Most of them are willing to start their careers with paid jobs, whereas the rest may want to be self-employed. However, it is a fact that the paid jobs are increasingly becoming limited, both in the government and nongovernment sectors. This situation creates a competition among graduates to find jobs and start their careers eventually leading to frustration and unrest among graduates (Ariyawansa, 2008)

There is an ongoing debate within academic circles as to whether university degrees should be job oriented and/or should undergraduates focus on their careers during their study periods and should try to shape their careers. Most universities are trying to respond to this requirement through introducing new degree programmes, revising curriculums, and introducing career development programmes.

Though there are many literatures available on career aspirations, there are limited number of researches done regarding the career aspirations of undergraduates. Even their studies have given some factors (Francis, 2002), (Keong, 2008) which influence career aspirations of undergraduates, there is a necessity for further research in this area. This research succeeded in contributing true and correct findings about the career aspirations of undergraduates in Sri Lanka by fulfilling the knowledge gap and empirical gap in the study area.

Research Questions

01. What are the factors that affect different career aspirations of undergraduates?
02. What are the key issues facing undergraduates regarding their career aspirations?

Research Objective

01. To identify the factors that affect different career aspirations of undergraduates.
02. To identify the key issues facing undergraduates regarding their career aspirations.

Literature Review

Career Aspiration

According to Mclagan (1989) career development is one of the main areas in practicing Human Resource Development. Career aspiration is one construct of career development (Ismail et al. 2008) and it is defined as individual's desire for the future employment that can be achieved if they work directly towards it (Ismail et. al 2008). Career aspiration is a good

measurement of the success of a career, (Ismail et al 2008) that will be emerged through the influence of social context including values, norms and beliefs (Ismail et al. 2008).

Theory of Planned Behavior

Attitudes and personality traits can predict the human behavior but they do not capture the influence of others for a behavior (Mishkin et al. 2016). Attitudes don't predict the behavior alone, because of this the ancient researchers tried to find factors that can predict a behavior. Some factors such as social influences indirectly affect attitudes and personality traits that are more closely linked to the behavior. Theory of reasoned action (TRA) is capable of capturing these two factors (Ajzen, 1991) and predicting the behavior using attitudes, subjective norms. In addition to these two factors, perceived behavioral control (PCB) was added to TRA (Armitage & Conner, 2001). The importance of attitude, subjective norms and perceived behavioral control vary from situation to situation. The intention can significantly be affected by attitude alone or both attitude and PBC (Ajzen 1991). Furthermore, attitudes, subjective norms and PBC are independently affecting the intentions (Ajzen 1991). Career choice or job-search behaviors are largely assumed to be volitional. The theory of planned behavior (Ajzen, 1991) has been used to predict a wide range of volitional human behaviors. Armitage and Conner (2001) identified TPB as one of the most popular theories for investigating human behavior.

Intention towards a Behavior

Intention towards a behavior is the central factor of TPB and TRA. Intention towards a behavior captures the motivation factors that influence one's behavior. Intentions is an indication for the effort of people to plan and how hard they try to perform a behavior (Ajzen 1991). The level of intention and performance level have a positive relationship. This will depend on whether the individual wants to commit towards a behavior (Zhang et al., 2015). It means a person can decide to perform or not to perform the particular behavior. Performance can depend on at least to some degree on non-motivation factors (time, money, skills, and cooperation of others; Zhang et al., 2015)

Attitude towards the Behavior

Attitudes are defined as the degree to which a person has a favorable or unfavorable evaluation towards behavior (Ajzen 1991). Also, it can be identified as predisposition toward an action, it is formed through experience and perceptions accumulated over the life of the person (Kuehn 2008). With regards to academic career intention of PhD holders at a German university, attitude toward academic career was a significant predictor. In that case women had fewer positive attitudes towards professorship and it was influenced by significant others such as parents, siblings, peers and etc. (Evers & Sieverding 2015). Changes in attitudes had a significant positive impact on entrepreneurial intention and entrepreneurial education had a direct effect on changing attitudes. Remeikiene et al. (2013) also state that attitude has a significant effect on entrepreneurial education. Pretheeba (2014) Zhang et al. (2015) found that attitude do not have a significant relationship with career intention and Chang (1998) also found that attitude directly have a slight impact on intention.

Subjective Norms towards the Behavior

Subjective norms are defined as the perceived social pressure to perform or not to perform the behavior (Ajzen 1991). Koech et al. (2016) family factors, peer influence, role model influence and career benefit influence affect an undergraduate's career choice.). Other than personal and family factors, peer groups and teachers can influence career aspiration significantly (Koech et al. 2016; Shumba and Naong, 2012). In most cases, career aspiration

is affected by social factors. Subjective norm is based on beliefs concerning whether important referent individuals or groups approve or disapprove of an individual establishing a business, and to what extent this approval or disapproval matters to the individual (Ajzen, 1991). These variables' importance is very high in the context which the researcher is focused on as Sri Lanka is a country which individuals holds a huge bond with the family, friends and the colleagues.

Perceived Behavioral Control towards the Behavior

PBC can be defined as "peoples' perception of the ease or difficulty of performing the behavior of interest" (Ajzen 1991). Before PBC there was a concept of perceived locus of control that outcomes are determined by one's own behavior. Another approach to PBC by Atkinson's theory of achievement motivation. In that theory important factor is expectancy of success. Expectancy of success refers that perceived probability of succeeding a particular task. This is similar to PBC. PBC is mostly similar to Bandura's (1977) concept of perceived self-efficacy. PBC and intention towards a behavior directly predict that behavioral achievement/ performance (Ajzen 1991). PBC is not relevant when information about the behavior is less, requirements and available resources have changed. And also, due to entering of new and unfamiliar elements to a situation (Ajzen, 1991). According to Boyd & Vozikis, (1994), perceived feasibility means the individual's perception on his or her ability to successfully initiate a new venture and it is said to be identical with self-efficacy. It is, therefore, a concept quite similar to perceived self-efficacy (Bandura 1997).

Socio-Economic and Demographic factors on Career Aspiration

Career aspiration of students is mostly influenced by parental and family factors (Lerdpornkulrat et al. 2009; Shumba 2012; Gemici et al. 2014). Especially the socio-economic status of the family has a positive relationship with career aspiration (Prasetyo 2005). People with high level of socioeconomic status are more likely to be knowledgeable of and choose a professional occupation. Females who are coming from low-income families are depending more on the experience of their relatives and friends (Brown & Barbosa, 2001). Siblings' influence is high in low socio-economic families (Ali et al., 2005) Well educated parents' children have high career expectation and also parents who are monthly employed. Students who are coming from high socio-economic families have high career aspiration and students who are coming from low socio-economic families have low career aspirations (Patton & Creed, 2007).

National cultures and Values on Career Aspirations

collectivist cultures are characterized as emphasizing the importance of the interdependence between people and the way in which individual identity is defined by one's relationship to others (Erez and Earley, 1993) Individuals in collectivist countries are more predisposed to be communitarian and to view individual performance as less important than group performance (Bandura 1997). During childhood, people learn to subordinate their needs to the requirements of their family, a sensitivity that extends to other in- groups later in life (Ajzen, 1991). The most preferred factors in job selection are having power and authority, peaceful work environment, opportunity for career advance and pay whereas the least motivating factors were close supervision and guidance, praise from supervisor, feedback on performance and a sense of belonging (Bandura 1997).

Methodology

In the study of Career Aspirations of Undergraduates in Sri Lanka, undertakes this as a descriptive research design and Qualitative research is conducted to achieve the research objectives.

Similarly, in this study, on understanding the perception, opinion, and underlying reasons for career aspirations of undergraduates in Sri Lanka. Therefore, the researcher has considered here the qualitative approach as the most appropriate method to explore the information that is critical for this research. Similarly, in this study, on understanding the perception, opinion, and underlying reasons for career aspirations of undergraduates in Sri Lanka. Therefore, the researcher has considered here the qualitative approach as the most appropriate method to explore the information that is critical for this research. Research population consist with all government university students and one way was collecting primary data from the 50 undergraduates as per the sample through semi structured interviews in qualitative nature. Interviewer to be prepared and appear competent during the interview. In-depth interviews with respondents allowed to develop deeply into career aspirations of undergraduates in Sri Lanka. For the case study analysis researcher select 3 from the sample. Thematic analysis was conducted using inductive coding organized using NVivo 8 qualitative analysis software in order to Analyze Data. Thematic analysis provides a flexible method of data analysis and allows for researchers with various methodological backgrounds to engage in this type of analysis.

Selected undergraduates belong to four age categories are identified as, 23, 24, 25 and 26 years old. Among selected undergraduates 60% of them are belongs to 25 years' age category and 15%, 15% and 10% respectively represented 24-, 26- and 23-years' age category.

Findings of the Study

Objective 01: To identify the factors that affect different career aspirations of undergraduates

Table 1: Themes which used to discuss factors that affect different career aspirations of undergraduates in Sri Lanka

Ranking	Theme
1	Subjective norms
2	Perceived behavioral control
3	Attitude

Source: Survey Data 2020

Influencing factors may have both negative and positive effect. Family become huge factor that going to influence career aspiration of undergraduate. Peers and family become important factor for selected undergraduates in the case of defining their career aspiration.

Dr. Janaka Wijesinghe was an undergraduate of University of Sabaragamuwa who had his aim to become a university lecture. According to his explanation during the interview the researcher identified that the peer and family influence become one of the negative factors for his career aspiration. Considering the effecting factors to the career aspiration family and peers become one of the highest effective factors according to the case study which is Dr. Janaka

Wijesinghe used to prove the real condition of the undergraduate career aspiration after affecting several factors.

Subject Area

Career aspiration may get affected by the studying area. According to the findings of this preliminary survey 53 % of the Graduates are currently engaged in the careers which are not related to their studied Degree programme in the university & the remaining 47% of the Graduates do engaged in the careers which are being related to their degree programme.

Sri Lankan university education has been criticized by many for not being job oriented although students and other stakeholders expected better employment opportunities for graduates after passing out from universities. The public opinion of the country is that state universities are not producing graduates according to the requirements of the country (Ariyawansa, 2008).

Considering all the factors in collected data 80% among respondents make their career aspiration related to subject area. But in the real situation when they enter to the world of work automatically, they have to change their career vision.

Perceived behavior control

PBC and intention towards a behavior directly predict that behavioral achievement/performance (Ajzen 1991), because people who are more confident towards a behavior are more successful in performing that particular behavior and also it can be considered as a substitute for a measure of actual control. PBC is not relevant when information about the behavior is less, requirements and available resources have changed.

Most of the situation's confidence about career aspiration cause to achieve career target. Desire and confidence towards specific field create career aspiration of undergraduates.

It has been found that peoples' behavior is significantly influenced by their level of confident towards performing a behavior. Self-efficacy beliefs can be influenced by choice of activity, perception for an activity, effort expending during performance, thought patterns and emotional reaction.

When required to be success in profession current situation is really hard. Have to have maximum qualifications and professional requirements as language, communication skills and other extra qualifications for performing well in the career. As undergraduates' basic degree not enough to compete with peers so additional qualifications and strategies should have follow in order to achieve success in career path

Considering the real situation there are many people who always seeking opportunities to make their career aspiration success. Mr. Bhanu Watawana, Proprietor of LEO Engineering services and CEO in Leo Engineering Private Limited and Probationary lecturer in University of Kelaniya one of the talented and dedicated student when he was in the Uva Wellassa University. His career aspiration during undergraduate period was to serve at NASA. He always seeking new opportunities and improve his career path. Still, he is waiting for the opportunity that he really needs to become during his undergraduate period.

Attitude

Attitude influences an individual's choice of action, and responses to challenges, incentives, and rewards. In most situations attitude had a positive relationship with the intention and it had an influence on other two constructs. . Respect, benefits as salary, incentives, live without stress, satisfaction identified by them in the case of success career life. They need to have

career aspiration with respect to these requirements. Depending on personal thought and personal attitude particular undergraduate have different career aspirations. Attitude gives a strong support for predicting the behavioral intention.

According to data that collected there is no difference between female choice and male choices. Socialization of undergraduates during university life is higher than other professional courses so they able to think in different ways. As a reason of that female and male undergraduates set their career aspirations even in the private sector and government sector. Attitude become important requirement for the career aspiration Dr. Nadeesha Manohari Wickramage who is the Senior Lecturer, Department of Physics, University of Ruhuna become one of the talented graduates that find during interview. Her attitudes towards the career aspiration became Un-ending desire to achieve first at every time.

Objective 02: To identify the key issues facing undergraduates with regard to their career aspirations.

Lack of experiences, deficiency of the most recent knowledge regarding modern technologies and international requirements become one of the key issues facing undergraduates when they selecting their career aspiration. Requirements and lacking new job titles to the country. As example people haven't understood the real need of the "Green Technologists" to the modern world. Same qualified well-known job titles were identified, but this should change. New job titles should have identified and have to give value to these jobs. This will be a better solution to limited to competition when selecting career aspiration.

External factors as political changes, economic effects and social factors also directly affect to the career aspiration. Different political parties change rules and regulations. Recruitments for government jobs also change with the political influence. External graduates of the country, Private degree holders become major threat to government undergraduates. Competition with these graduates become disadvantage to career aspiration. As an example, Information Technology field have huge competition with private and government graduates.

Huge competition, lack of monetary facilities to follow professional courses, requirement of professional courses, fluency in English is another major issue in selecting career aspiration. Though there is a limited practical approach have undergraduate level during their degree programme, when enter to the professional world practical knowledge become an important requirement.

Time period that takes to complete a degree and updating the necessary knowledge and the lack of facilities to do new inventions in the food production sector were identified as another aspect of the issues which are faced by the undergraduates in Sri Lanka. Moreover, nearly thousands of undergraduates are passing out annually from universities and seeking for employment opportunities. Most of them are willing to start their careers with paid jobs whereas the rest may want to be self-employed. However, it is a fact that the paid jobs are increasingly becoming limited both in the government and nongovernment sectors. This situation creates a competition among graduates to find jobs and start their careers eventually leading to frustration and unrest among graduates. 100% of the respondents agree with the statement that these issues become great influence to career aspiration of the undergraduates in Sri Lanka.

Conclusion and Recommendations

Conclusion

Being the most secured path for the employability as per the belief of most of the Sri Lankans, university education plays a major role in the Sri Lankan societal context. However, the undergraduates face numerous challenges after completing their university degree especially when seeking for suitable employment opportunities. Based on this proximity the career aspirations of the undergraduates become a major concern, since the desired paths and the related career behaviours are being determined.

This study was conducted mainly to define the career aspiration concept in the context of current Sri Lankan undergraduates, to identify the factors that affect different career aspirations of them and to identify the key issues facing undergraduates with regard to their career aspirations

Referring to the selected sample it can be considered as a typical cross section of undergraduates in Sri Lanka and it has covered all the major areas of the Sri Lankan university education system. This will enhance the representation of the population scope by the sample.

As per the first objective the researcher identified subjective norms, perceived behavioral control and attitude are the factors which affect different career aspirations of the undergraduates in Sri Lanka. According to the theme of subjective norms of the family, peers and subject area have become a huge factor which is influencing to career aspiration of an undergraduate. But there are some people who do not concern about the family factors or the peer pressure. Then through the second theme called perceived behavioral control the researcher identified that the desire and confidence towards specific field create career aspiration of undergraduates. Finally, by analysing the third theme of attitude it is concluded as depending on personal thoughts and personal attitude particular undergraduate has different career aspirations. Attitude influences an undergraduate's choice of action, and responses to challenges, incentives, and rewards. In most situations attitude had a positive relationship with the intention, and it had an influence on other two constructs.

In the third objective, external factors such as political changes, economical effect and social factors also directly affects to the career aspirations. Moreover, huge competition among the graduates coming out from various private and public education institutions, lack of monetary facilities to follow the professional courses, requirement of professional courses, and fluency in English are the other major issues in selecting career aspirations. In addition to that limited practical knowledge of the Sri Lankan undergraduates possess is a crucial factor which they face in the world of work. Career guidance provided by the university has been another crucial factor in determining the career growth of the Sri Lankan undergraduates. But some factors like the lack of awareness and the lack of dispersion of career guidance units' services have affected in a negative manner to the career aspirations of the Sri Lankan undergraduates.

The study was done in the context of Sri Lankan state university students. Therefore, the results are being more oriented to the current context and can be applied to the day today conditions, which we face in the present. Government can easily use these results to create the national education policies. At the end of the research a proper definition for the "Career Aspirations", could be developed which is more relevant to the Sri Lankan context.

Recommendations

As for the research findings, the country can create a work force which is needed as per the national requirements, just by introducing that specific field of study to the country's

education system. By expanding the country's education system to a vast area will result many professionals to the country in diversified fields.

Can introduce professional study paths for professions which is not formulated yet. Such as Police service, it would enhance the equality and professionalism of those careers.

Have to maintain a good salary scales and benefit packages in the country's professional fields, the qualified people could be recruited for those professions and that will also assist to retain them in the respective career fields.

Government sector has to amend its principles and policies in order to allow the talented people to climb up the ladder in the organizational hierarchy with aligning them to the private sector organizational standards.

Additional qualifications and strategies should have to be followed to achieve the success in career paths of undergraduates and new job titles need to be identified and created with due Salaries and perks.

There should be channels to gain the practical experience related to their respective fields while studying in the university and this opportunity should be opened to almost all the undergraduates.

The services offered by university career guidance units has to be elaborated further, by expanding the services and enhancing the awareness of the public about it. Sri Lankan undergraduates should be more cautious in selecting their course of study, as per their preference, rather than selecting the one given by the UGC.

Finally, government need to do a proper analysis to assess the fulfillment of the existing courses with the industrial requirements.

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Conceptual Review on Digital Transformation of Higher Education

Udovita P. V. M. V. D.¹

With the increased impact of digital disruption in all the industries, today, the concept of digital transformation has gone beyond a mere technological shift emerged and has become an important aspect of business. Among many other different industries which are highly influenced by digital transformation and digital disruption, higher education has become one of the foremost sectors influenced by digitalization and currently has undergone rapid and diverse changes in the industry environment. Alongside, in order to achieve a successful digital transformation as well as to provide a better learning experience to the learner, this paper attempted to investigate the concept of digital transformation and provide a holistic view on digital transformation, as well as propose a framework in dimensions of digital transformation in higher education. It has followed comprehensive literature review as the main research tool and the paper is framed as a concept paper with the discussion on empirical insights. Finally, it concludes the paper with some research directions and priorities for the future studies.

Keywords: *Digital Transformation, Dimensions of Digital Transformation in Higher Education, Learning Experience*

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¹ Department of Marketing Management, University of Kelaniya, Sri Lanka (2017_viduni@kln.ac.lk)

Introduction

The technology has undergone enormous changes during past few decades and it has become an inseparable part of our everyday lives which has undoubtedly influenced and changed the way we function (Rassool & Dissanayake, 2019). Such advanced technologies have unveiled many new opportunities for businesses in the areas of information, computing, communication and connectivity as well as business model innovation (Bharadwaj, Sawy, Pavlou, & Venkatraman, 2013). Many researchers have defined digitalization in different perspectives. Kaplan, Waste, Wood-Harper and DeGross, (2004) define Digital transformation as "the changes associated with the application of digital technology in all aspects of human society" (Kaplan et al., 2004). Meanwhile, Wade (2015) describes digitalization as going paperless and application of digital aspect for all aspects of the society. Almost all the sectors and industries are influenced by the effects of this Digital transformation or Digitalization (Jurisic & Kermek, 2011). As stated by Hess, Matt, Benlian and Wiesböck, (2016), the market changing potential of digital and information technologies are not just limited to commercial organizations and business processes but it has enabled the whole society to change the way it communicates and collaborates (Hess et al., 2016).

Among many other different industries which are highly influenced by digital transformation and digital disruption (Udovita, 2020), higher education has become one of the foremost sectors influenced by digitalization and currently has undergone rapid and diverse changes in the industry environment (Šereš, Pavličević, & Tumbas, 2018). Higher education of a country acts as the hub of knowledge that is vital to the creation of a knowledge-based society. Moreover, the country's ability to produce and make use of that knowledge will decide the development of that particular country. Creation and dissemination of knowledge will act as major determinants of an effective higher education system in any country. In other words, knowledge is becoming the core of a country's competitive advantage (Jayasundara, 2014).

The potential of new technologies in fostering national development and provision of quality education is globally recognized (Wikramanayake, 2005) and the evolution of industry and digital technologies have unfastened many avenues in the learning and education system globally. Digitalization of education is not a mere application of technology in teaching and learning, but an entire restructuring of the educational process that encompasses teaching methods, facilities, competency model, semantic model of the educational program, teacher evaluation, digital management of routine processes in the educational institution as well as the infrastructure (Besshaposhnikov, Leonov & Prilipko, 2018). Thus, through digitalization of the education, there is an impact and a change on the knowledge and skills acquired by students as well as a huge transformation of the teacher's role from "dispenser of information" to "facilitator of learning" is depicted (Zhadko, Popova, & Gagarina, 2019; Wikramanayake, 2005).

The ability of accessing and transmitting the information from anywhere and by anyone, and the ability of work to be carried out across boundaries of time, distance, and function, education industry has gained a tremendous attention on digitalization. Further, digitalization of education plays an important role in adapting the educational system to the target audience of the "digital natives" generation (Zhadko, Popova, & Gagarina, 2019).

Purpose of the Study

A growing body of literature has examined regarding digitalization which have got a high support in the industry in the form of industry reports from institutes such as research centers like the MIT Centre for Digital Business (Unruh & Kiron, 2017; Kane, 2016; Westerman & Bonnet, 2015; Weill & Woerner, 2017), research firms like Gartner (Karamouzis, Maurer, McIntyre, Perkins, Dulaney, Short, Taylor, 2014), technology advisory firms like Accenture (Accenture LLP, 2015) or Capgemini (MIT Center for Digital Business and Capgemini Consulting, 2011), and strategy consultancies such as McKinsey, BCG, and Bain. The phenomenon of digital transformation is widely studied in numerous academic domains exploring the concept of digital transformation from different perspectives (Šereš, Pavličević, & Tumbas, 2018). However, most of the recent work related to digitalization are mainly focusing on the business and organizational context and certain aspects of digitalization such as dimensions, challenges, drivers, success factors and business models and strategy (Ismail, Khater, & Zaki, 2017).

However, from an academic point of view, being one of the key modern trends today, digitalization of education which is one of the critical parts in this subject area has been recognized in the literature in an infant level. Thus, as previous researches have mainly focused on digital transformation in the context of commercial organizations and business processes, the education industry is rather less recognized creating a gap in the existing literature (Wilms, et al., 2017). As per the literature review further justifies, the factors such as globalization of education, increasing competition and the growth of students' mobility, the phenomenon of digital transformation is widely studied in numerous academic domains exploring the concept of digital transformation from different perspectives (Šereš, Pavličević, & Tumbas, 2018) is evident that a serious attention is required for the transformation of an educational institution in terms of its digital specificity.

Furthermore, the recent COVID-19 pandemic has made a huge impact on all the sectors of the economy including the education sector. As per the global survey on the impact of COVID-19 on higher education conducted by the international association of universities and UNESCO, a huge disruption has caused by the Covid-19 on higher education and 89.4% of the globally enrolled learners has been severely affected by the pandemic (Marinoni, Land, & Jensen, 2020). Given the situation, the digitally transformed education has gained a tremendous attention over the past few months and has paved the path towards the rise of digital transformed education. But, even before COVID-19, there was already high progression and adoption in education technology. As a matter fact, with global educational technological investments reaching US\$18.66 billion in 2019 and the overall market for online education projected to reach \$350 Billion by 2025. Whether it is language apps, virtual tutoring, video conferencing tools, or online learning software, there has been a significant swell in usage since COVID-19 (Li & Lalani, 2020).

In this context, the paper intends to investigate the concept and provide a holistic view on digital transformation on higher education, based on an empirical study on available literature and propose a framework in dimensions of digital transformation on higher education.

Methodology

In this research the researcher follows a deductive approach where the explanations and arguments are supported by empirical evidences and associated theories. The researcher has reviewed journal articles, industry publications and reports from institutes such as research centers, technology advisory and strategy consultancies as well as report from credible web sites to understand “Digital transformation in higher education sector”. Accordingly, literature review was employed as the main research tool. The paper is organized as a concept paper whilst arguments were empirically supported. Finally, the author discusses and conclude the paper proposing a framework for dimensions of digital transformation in higher education and postulating future research directions in line with the synthesized discussions.

Theoretical Background

The paper presents the literature review considering digital transformation on higher education sector as the main concept whilst supportive theoretical and empirical contents are presented in line.

Digital Transformation / Digitalization

A growing number of previous scholars have examined regarding digitalization and as well as has got a high support in the industry in the form of industry reports from institutes such as research centers like the MIT Centre for Digital Business (Unruh & Kiron, 2017; Kane, 2016; Westerman & Bonnet, 2015; Weill & Woerner, 2017), research firms like Gartner (Karamouzis, Maurer, McIntyre, Perkins, Dulaney, Short, Taylor, 2014), technology advisory firms like Accenture (Accenture LLP, 2015) or Capgemini (MIT Center for Digital Business and Capgemini Consulting, 2011), and strategy consultancies such as McKinsey, BCG, and Bain. The phenomenon of digital transformation is widely studied in numerous academic domains exploring the concept of digital transformation from different perspectives (Štereš, Pavličević, & Tumbas, 2018; Ismail, Khater, & Zaki, 2017).

Many researchers have defined digitalization in different perspectives. Kaplan, Waste, Wood-Harper and DeGross, 2004 defined Digitalization, which is also known as Digital transformation as the changes associated with the application of digital technology in all aspects of human society (Kaplan et al., 2004). Meanwhile, Wade, (2015) describes digitalization as going paperless and application of digital aspect for all aspects of the society. Almost all the sectors and industries are influenced by the effects of this Digital transformation or Digitalization (Jurisic & Kermek, 2011; Bharadwaj et al, 2013; Cuofano, 2019).

From an academic point of view, digitalization of education is considered as one of the pivotal parts in this subject area. Being one of the key modern trends, as per technology and education specialists, digitalization has three key stages. The first stage is digital competence where users are building their skills and confidence with digital tools. In an education context, LMS or LCMS educational platforms can be identified as digital tools. The second stage, digital usage, refers to the stage where all users are familiar with and reasonably confident with these digital tools. In this stage, the digital educational solutions become a normal and vital part of the work environment. The third stage, digital transformation, is where experts say that true digitization occurs. This is when users begin to experiment and innovate with the digital tools, they have available to them. This innovation results in exciting and creative ways to use these new technologies in order to enrich the environment (Rosell, n.d.).

Why Higher Education System Should Undergo Digital Transformation?

With the growing diffusion of technology in to each and every aspect of our lives, and education being an inseparable part of our lives, there is an increasing importance of incorporating digital elements in to education (Wanninayake & Chovancova, 2012). It is well evident that educators from around the world and from all grades and levels are coming to realize the benefits of digital technology in the classroom. The digital transformation and the rise of educational technology has encouraged the teachers to make drastic changes to their teaching methods and students to make changes in the learning approaches at a much faster rate than expected (Newman, 2017). Digital transformation in education can enhance the traditional face-to-face learning environment (Šereš, Pavličević, & Tumbas, 2018). There are numerous benefits of going digital in a context in which it is becoming increasingly necessary at today's context. Just as the digital transformation has shifted the consumer behavior in to a different arena, digital and tech-centric behaviors of students, teachers, and parents are expanding the way of teaching and learning occurs. Understanding this behavioral shift is utter important in order for educational organizations to succeed in the digital future. Today, education has been impacted by technology by introducing new methods of learning, such as adaptive learning, flipped classroom models, and massive open online courses (MOOCs), but more shifts will occur as technology continues to evolve (Deloitte, 2016). On the other hand, the current and future trends in digital education proves that it is a field for continuous innovation and invention (Papadopoulou, 2020).

Digital transformation streamlines the solutions and services to improve the outcomes – be it in business, in day-to-day life, or on schools or higher educational institutes. This is one of the reasons why Digital Transformation in Education matters. Digital Technologies enables the educators to understand their progress and that of their students. This also includes improving sharing, collaboration, communication, and creativity between students, their peers, and their teachers. It also enables a platform that goes beyond grades and allows educators to deliver effective student-driven learning experiences that facilitate success beyond graduation. Services such as LMS, CAL, Microsoft Teams, Zoom and Google Classroom allow classrooms and teachers to engage on new levels, while also streamlining how assignments, tasks, and grading are done and delivered. It also provides an avenue for improved collaboration and communication between students and their teachers, parents, and peers. Another very important aspect of digital transformation of education is improved decision making of the academic personals. Learning analytics on the other hand, is getting a tremendous attention at present since it promotes accurate decisions such as the planning of study systems or activating support networks when students want to drop out (Wikramanayake, 2005).

Moreover, the digital transformation of education would pave the path to overcome many challenges that educators are encountering in the conventional model of teaching. One such challenge is, ono-on-one tutoring is most of the times monotonous and inefficient and also, physically less convenient and effective in a classroom of 50+ students. However, irrespective of the challenges, the teacher is always obliged to complete the course within a specified time. Thus, under this circumstance, in a conventional teaching environment, catering to individual needs of the students effectively is often not possible for the teacher (Balkin & Sonnevend, 2016). But in a digitalized platform, the teachers can customize the delivery of the course based on each individual student learning speed and capability. Further, the ability to provide individual feedbacks would help the student to communicate his/her learning difficulties and the teachers can come up with the best solutions together. Thus, the whole system becomes

more holistic and productive leading to better performance of students over time (Deloitte, 2016).

Furthermore, today, we are living in a sharing economy where various content can be shared among anyone with just a one click. Research and sharing information, which used to take up a lot of learner's energy and time earlier, now takes up only a few seconds. In conventional learning, working on a group projects essentially needed a physical gathering of the members. But, with Google Docs, Zoom, Microsoft Teams and other cloud based learning tools, working on a group project while being miles apart has become easier than ever before. This type of connected learning creates an ecosystem of coordination which if used efficiently, will lead to better learning outcomes as well as enhanced collaboration skills (Kelly, 2020).

Further, most of the times, conventional learning environment gives us little room for engagement as it constitutes of students, textbooks and one instructor for teaching. On the contrary, digital mode of learning gives a wider range of choices to the students to learn from and thus a higher level of engagement can be seen in digital platforms. Availability of various interactive rich media such as image and video content, gamification, interactive sessions and virtual reality etc. makes the learning process more interesting and effective (Balkin & Sonnevend, 2016).

Moreover, in conventional learning, the method of providing the student feedback is highly unilateral. The teacher would mark the performance and provide grading which hardly tells anything about the how of improvement. But, with digitalized education, the real time analysis of performance and auto generated reports, the assessment of each student much more transparent and informative. It even allows the student himself measure their performance and come up with appropriate solutions on their part. Digital learning can be self-directed resulting in increasing capacity to think critically (Deloitte, 2016).

Artificial Intelligence (AI) and Machine Learning are also delivering new forms of learning experience that equip teachers with the tools they need to prepare their class for a Future Workplace. The world beyond graduation has changed significantly for the present student and digital technologies help provide them with the tools they need to be responsible and capable digital citizens.

Thus, without a doubt, it is well evident that, Digital learning is beneficial to students, but also gives educators an opportunity to enhance their teaching skills based on the wants and needs of the modern age. By learning to use technology alongside books and pencils in the classroom, they raise their abilities to create leaders of tomorrow. Educators can also map their performance as a teacher and get feedback from students, which oftentimes is difficult in brick-and-mortar only classrooms (Roy, 2020).

Discussion

Dimensions of Digital Transformation of Higher Education

Digital transformation is not merely a basic hardware or software upgrade of the teaching and learning process (although that can play a part) but it is a physical and philosophical change designed to meet the ever growing demands of the students and the educational institutes to create a learning environment where everything connects (Deloitte, 2016). Thus, it can be considered as an ecosystem that creates a collaborative, interactive and a personalized learning experience with interconnected technology, services and security while bridging the digital gap (Balkin & Sonnevend, 2016).

A growing number of literatures are available that propose dimensions of digital transformation in corporate and business sector (Wade, 2017; Ehrlich, Fanderl, & Habrich, 2017; Larjovuori, Bordi, Mäkinemi, & Heikkilä-Tammi, 2016; Saha & Pandita, 2017; Schwertner, 2017; MIT Center for Digital Business; Capgemini Consulting, 2011; Hess et al., 2016; Hartl & Hess, 2017). However, digitalization of education which is one of the pivotal part in this subject area has not been dealt with in depth and there still exists a gap in literature that determines the digital transformation in the context of collaboration and communication at educational institutes (Wilms, et al., 2017). However, many researchers have introduced different models and frameworks that describe the dimensions of creating a better learning environment and experience for the students such as Community of Inquiry (CoI) model by Garrison, Anderson and Archer (2000) and Perspectives on Learning Environments model by Edgar (2012).

The Community of Inquiry (CoI) is a model that has been used extensively in research about the use of technology in education (Garrison, Anderson and Archer 1999; Garrison et al., 2009). As per the CoI model, learning occurs through the interaction of three elements i.e. cognitive presence, social presence and teaching presence (see Figure 1).

Figure 1: Elements of Educational Experience



Source: Garrison, Anderson, & Archer, 1999

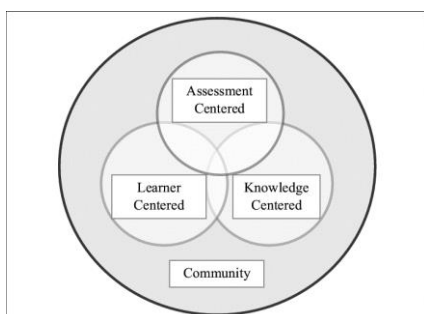
As per the CoI model, the teaching presence includes three areas of responsibility in terms of design, facilitation and direction of cognitive and social processes for the purpose of realizing meaningful and educationally worthwhile learning outcomes (Shea, 2011). Teaching presence plays a critical role in creating and sustaining a collaborative learning experience. It provides the essential leadership and cohesiveness for a purposeful and successful learning experience (Garrison & Cleveland-Innes 2005). The importance of teaching presence for the successful use of digital learning communities has been highly recognized in the growing body of literatures (Meyer 2003; Murphy 2004; Swan and Shih 2005; Vaughan and Garrison 2006; Wu and Hiltz 2004). However, it is interesting to identify that digital technologies exponentially expand and change the role of teaching presence in education. In terms of design and organization category, digital technologies have paved the way for designing innovative, challenging, collaborative learning activities and environments (Vaughan and Garrison 2006). At the same time, in terms of facilitation, these new technologies have provided new ways for communication and interaction between and among students and teachers, thus enhancing

efficiency and effectiveness. The whole direction process could be implemented through sharing and inoculating information from diverse sources in variety of forms (Murphy 2004; Swan & Shih 2005).

The second element of CoI is the cognitive presence which is a central factor to successful student learning. It is the extent to which the participants or students are able to construct meaning through sustained communication. (Garrison & Akyol, 2009). Cognitive presence is operationally defined in terms of four phases as; the presentation of a problem, exploration of the problem through information gathering and discussion, bringing relevant information and ideas together that have the potential to resolve the problem and, finally testing of proposed solutions. Indeed, the emerging digital technologies provide various options for the development and support of cognitive presence in a learning environment. O'Reilly (2005) emphasizes the power of Web 2.0 and Internet of Things (IoT) to harness the collective intelligence by enabling users to add and discover new content and new sites.

Social presence represents the third essential element in the creation of a collaborative learning environment. Social presence is defined as the degree of participation, ability to communicate effectively in a trusting environment, and develop inter-personal relationships (Garrison, in press) thus, considered a critical variable for learning. However, in the early days of exploring digital learning, there was a considerable level of criticisms regarding the absence of social presence in virtual learning platforms. Some scholars even argued that the lack of nonverbal and vocal cues in a digital or virtual learning environment prevented students from developing a sense of personal connection and belonging and thereby hindering the social presence (Short et al. 1976). However, in later researches, this has been proven to be false (Gunawardena 1995; Swan 2003; Swan and Shih 2005). Given the new features and elements of the new digital technologies that make it easier to interact and communicate affective responses in both synchronous and asynchronous formats. Moreover, the platforms such as personal blogs, social media sharing or social networking sites could support the development of social presence by means of providing ways for self-disclosure or to express emotions through a virtual environment. This will result to a learning environment where learners better know and trust each other and feel comfortable during the learning process. Through the integration of all three presences, it is possible to create a better learning experience for the student (Akyol & Garrison 2008). On the other hand, the National Research Council's Commission on Behavioral and Social Sciences and Education, has provided a model for effective learning environments in which a system of four interconnected components combine and mutually support each other. These interconnecting components together will provide a foundation for a better learning environment. The four elements are identified as; learner centered, knowledge centered, assessment centered and community centered.

Figure 2: Perspectives on Learning Environments



Source: Edgar, 2012

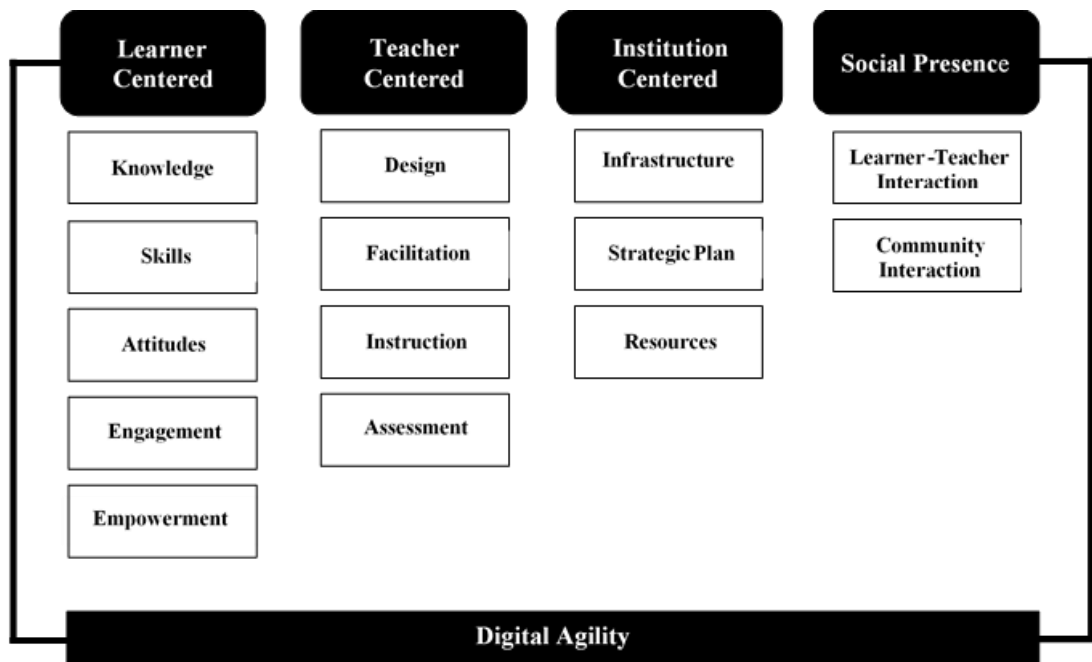
In this model, learner-centered environments focus on the “knowledge, skills, attitudes, and beliefs that learners bring to the educational setting” (Shea, Fredericksen, Pickett, & Pelz, 2003). This is more than mere providing information or teaching skills to a student, but an approach that focuses on learners concerns and involve them in decision making and problem solving with the experiences the learner brings to the educational environment.

The second element of the model is identified as the Knowledge-centered environment which enable and facilitate the students to understand and transfer knowledge. Learners in this type of environment combine experience and information in order to engage in knowledge building with the deeper understanding on the disciplines (Berlanga & Garcia, 2005). Here, students are enabled to learn to work with information through manipulating information and ideas by synthesizing, generalizing, explaining, hypothesizing, or arriving at conclusions that produce new meaning and understandings for them.

To be an effective learning environment, it also must be assessment-centered, that provide opportunities for feedback and revision. Further it is important that what is assessed must be congruent with one’s learning goals (Bransford et al., 2000). There are two major types of assessment classified as formative and summative. Formative evaluations are concerned with giving feedback to improve learning and teaching. On the other hand, summative evaluations measure learners’ outcomes at the end of learning activities and units. Thus, assessment is a key facet of designing, implementing, and carrying out a learning environment for learner progression (Anderson, 2011).

The fourth element is the community-centered environment, that foster explicit values or norms to promote lifelong learning to the student (National Research Council, 2000). A community-centered environment will give sense of community to the student covering the aspects such as the classroom, the school, and the connection between the school and the larger community, as well as the home (Bransford, et al., 2006). The understanding of community importance and its effect toward learning can have a significant impact on academic achievement. Alignment of these four perspectives is needed for the creation of a better learning environment.

Based on above discussion the author develops a framework for dimensions of digital transformation of higher education and providing a digitalized learning experience to the learner. Accordingly, the digital transformation strategy on education should serve as a central and a holistic concept that integrates every part of the teaching and learning process and even go beyond the borders. Thus, by analyzing and summarizing all the frameworks and literatures and by looking at an educational institute in a 360-degree view, four key areas can be identified that need to be addressed in a digital transformation process which are the learner, teacher, the institute and the community or social presence (Garrison & Akyol, 2009). Moreover, flexibility and agility are key managerial challenges that could be found in an any organizational culture. Thus, digital transformation can be highly supported and backed by organization cultures agility that facilitate the adoption of new management concepts and further it is very important to have open and change oriented mind-set which is required to master digital transformation.

Figure 3: Dimensions of Digital Transformation in Higher Education

Source: Author Generated

Conclusion and Future Research Directions

Digital transformation has gained a tremendous attention by corporate sector practitioners as well as scholars today due to its revolutionary impact of advance digital technologies on delivering excellent engagement with clients or finding ways in which the enterprises benefit from efficient processes (Rassool et al., 2019; Jurgielewicz, 2019). From an academic point of view, being one of the key modern trends today, digitalization of education is considered as one of the pivotal parts in this subject area. With the growing penetration of technology in our lives, considerable interest is growing in terms of adapting digital technologies in the education ecosystem. There are numerous benefits of going digital in the context of higher education where it can enhance the traditional face-to-face learning environment (Šereš, Pavličević, & Tumbas, 2018) as well as it allows the learners to collapse time and space (Anderson, 2011)

Moreover, the relationship between values of higher education and technological capabilities will ensure the successful use of digital technologies in higher education. Thus, the ideals of higher education will shape the design and the use of technology in the learning process. Thus, it is utterly important to keep a balance between values of higher education and technological capabilities. Sometimes educated become too captivated with technology in the process of adopting new technologies in education and completely loose the sight of the educational goals. This will result in imprudent technological initiatives and increased resistance from all the parties. Thus, as literature justifies, irrespective of the framework, model or strategy used by the institutes to digitally transform the higher education, in order to attain a successful digital transformation, the educators must take a holistic 360-degree approach in transforming various aspects and dimensions of education.

However, by examining all the definitions, aspects, perspectives, dimensions and models discussed in the growing body of literature it can be identified four common crucial areas a higher educational institute needs to focus on its digital strategy roadmap, which are the learner, teacher, the institute and the community or social presence (Garrison, Anderson, & Archer, 1999; Garrison & Akyol, 2009). Further, under the above-mentioned key four areas, there are fourteen dimensions that educators must focus and address and can be used as the basis in the process of formulating needs, identifying gaps and planning and implementing the digital transformation process. Furthermore, along with the above discussed fourteen dimensions of digital transformation, the higher educational institute should also accompany the digital business agility in the organization that will facilitate the adoption of new management concepts and have an open and change oriented mind-set which is required to master digital transformation (Wade, 2017).

Finally, it is evident that digital transformation in higher education is a highly dynamic and a timely aspect which the universities and higher education institutes need to prioritize in its strategy formulation process. Thus, the author emphasizes and suggests future work need to be carried on embedding digital transformation in higher education and the strategy ought to be focused holistically in order to provide a better learning experience to the learner.

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Impact of Social Media Marketing in Selecting Sri Lanka as a Tourist Destination

Sarathchandra. A. B. S. P.¹, Wijesundara, C. B.² and Guruge, M. C. B.³

Social media provides a platform for the tourism service providers to market their products and services at a lower cost. As tourist arrival to Sri Lanka has been increasing, interested stakeholders have started using social media marketing as a tool to promote Sri Lanka. Since only a limited number of studies have been carried out on the impact of social media marketing on the Sri Lankan tourism industry, this study was carried out to address this research gap. Subsequently, the study examines the impact of social media marketing, social media marketing content and social media marketing characteristics on the decision of travel destinations of tourists arriving in Sri Lanka. After studying many researches that have been carried out in other countries, the conceptual framework was developed based on the available literature. Simple random sampling technique was applied to choose the respondents from the population and an online survey was carried out to collect data using a Google survey questionnaire and SPSS was utilized for data analysis. Based on the results, it was found that information, perceived usefulness, perceived ease of use and electronic word of mouth has a positive relationship with purchase decision. However, perceived risk shows a negative relationship.

Keywords: *Social Media, Social Media Marketing, Sri Lanka, Tourism Industry, Travel Destination Decision*

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¹ University of Kelaniya, Sri Lanka (sumu_du@hotmail.com)

² Department of Marketing Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka.

³ Department of Marketing Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka.

Introduction

The creation and accessibility of the Internet have changed how travelers access information, the way they plan for and book trips, and the way they share their travel experiences (Leung, Law, Hoof & Buhalis, 2013; Xiang & Gretzel, 2010). Increasing popularity of social media platforms that enable the Internet users to collaborate, communicate and publish original content such as blogs, videos, wikis, reviews, or photos is one significant development in the evolution of the Internet (Boyd & Ellison, 2007). Online travelers widely use social media websites to create consumer-generated content (CGC) (Gretzel, 2006). Sri Lanka has been identified as a fast-growing tourist destination in the recent years and the tourist arrival has been increasing over the years. Hence, this research discusses the background of the study with respect to the tourism industry in Sri Lanka and Social Media Marketing related factors.

Background of the Study

Tourism industry has been growing fast in Sri Lanka over the years and the number of tourists arriving in Sri Lanka has increased in the recent years by generating over 2.3 million tourist arrivals in 2018. (Sri Lanka Tourism Development Authority, 2019). Hence, tourism has been ranked as the fifth largest source of foreign exchange earnings in 2012, and the third largest in 2013 contributing 5.2 per cent to total foreign earnings of the country (Welgamage & Perera, 2015). Having received the accolade of being a top tourist destination, the country has become highly marketable in social media platforms. Thus, this study plans to investigate and assess the impact of social media marketing, on the decision of the travel destination of tourists, by using information obtained from travelers and service providers.

Social media is a significant component on the internet and it is referred to as a platform which enables the users to interactively create, share, communicate and discuss ideas, experiences and opinions (Shan, Ren & Li, 2016). Thus, social media applications have been observed as one of the most efficient and influential implications that have been progressively engaged in most aspects of people's lives (i.e. social life, commercial life, business life, educational sector, political life) (Alalwan, Rana, Algharabat & Tarhini, 2016; Algharabat, 2017; Hinz, Skiera, Barrot & Becker, 2011). Furthermore, consumer behavior related studies suggest that users consider the information shared on the internet and spend more time on websites that offer third party assessments (Huang, Lurie & Mitra, 2009) and some other studies shows that the information gathered from websites can directly affect the buying decision (Park & Nicolau, 2015).

Social Media has enhanced people's ability to share travel experiences with a larger audience than ever and it has become a significant factor in promoting tourism, facilitating tourism service providers and obtaining customers' feedback (Zeng & Gerritsen, 2014). Furthermore, social media provides destination marketing organizations with a tool to help them reach a global audience with relatively limited resources and research shows that most of the social media websites such as Trip Advisor and Booking.com allow consumers to share their travel photos, videos, comments and reviews, which provides information for potential travelers on vacation planning (Xiang & Gretzel, 2010).

However, there is lack of theoretical and empirical findings in relation to the factors that may potentially influence consumers' behavior in using social media marketing content as a tool for destination decision making within the tourism sector in Sri Lanka. Hence, it is hoped that this study may add to the existing literature by examining the context of the Sri Lankan tourism industry.

Research Problem

Sri Lanka is one of the most popular destinations for travel in the world and tourism is one of the country's main foreign exchange earners and contributors to the GDP. Moreover, the government of Sri Lanka has chosen tourism as one of the key strategies in achieving sustainable economic growth and has taken various efforts to boost the tourism industry (Gananapala, 2017).

There is an enormous opportunity for countries such as Sri Lanka, to capture this lucrative segment and future travelers through attractive images on social media channels such as Instagram which is highly popular amongst millennials and travelers (Cassim, 2017). According to Senanayake and Anise (2019) social media usage and functionalities in social media has a relationship with millennials' travel decision making process and he recommends to carry out more in-depth studies on this subject.

Although the literature on social media marketing in tourism appears very rich, only a limited number of scholars have explored the impact of social media marketing on destination decision of tourists arriving in Sri Lanka. Therefore, the literature gap needs to be addressed and tourism service providers would greatly benefit from understanding the effective social media marketing approaches.

Objectives of the Study

There are mainly three objectives found in this paper referring to the two main concepts being examined. The first objective is to find out the impact of social media marketing on destination decision of tourists arriving in Sri Lanka and the second is to find out what are the social media marketing content that impacts positively and negatively on travel destination decision of tourists arriving in Sri Lanka, whereas third is to find out the social media marketing characteristics that mostly influence the purchase decision.

Literature Review

Many authors in the literature have emphasized the major benefits of the internet as an effective communication channel in the tourism industry (Doolin, Burgess & Cooper, 2002; Schuckert, Liu & Law, 2015). Research over the years shows the increase in travel and tourism sector in terms of both numbers of travelers and tourism expenditures (Sigala, Christou & Gretzel, 2012).

Social Media Marketing in Tourism

Social media marketing is a new channel for businesses and the term social media marketing has been defined and argued in different ways. Social media marketing is referred to as direct or indirect marketing, practiced through web tools such as content sharing sites and social networks (Gunelius, 2011). It is an emerging way of spreading word -of -mouth and establishing relationships through being interactive as opposed to one -way communication (Icoz, Kutuk, & Icoz, 2018). Some of the key values and unique characteristics of social media are low budget, easy and free access, global reach, simplicity and flexibility, collaboration among users, community access, active relations with customers, easy connectivity and measurability (Weinberg, 2009; Elley and Tilley, 2009). Due to the above values and characteristics, social media is now transforming to be a key element of the marketing mix for many businesses.

Advancement of internet technologies, has influenced the tourism industry and thus, in their travel and tourism experiences tourists have become co-marketers, co-designers, co-producers

and co-consumers (Sotiriadis & Zyl, 2013). Research shows that new technologies and social media have now become the key to the growth of the tourism industry (Ban, Ancusa, Bogdan & Tara, 2015). The nature of services of tourist service providers has been getting positive outcomes from the brisk extensive spread and interaction in social media by travelers and tourism operations (Minazzi, 2015). Furthermore, social media was reported to have helped create brand awareness within the hospitality industry, thus leading to a competitive advantage (Yan Xin, Ramayah, Soto-Acosta, Popa, and Ai Ping's, 2014).

Information

The research suggests that tourism and hospitality service providers need to consider how consumers evaluate the information content and booking features through various online platforms (Chen, Murphy & Knecht, 2016). Furthermore, service providers utilize social media in attracting tourists to their properties, introducing promotions, getting the attention of media, and create awareness, recognize and promote the brand (Eroz and Dogdubay, 2012). Furthermore, they review social media posts regularly, track posts and comments appearing in social media since negative e-word of mouth adversely affect the reputation and image of the firm (Leung, Bai & Erdem, 2017).

The research shows that customers decide on the amount of information needed by searching through social media as a platform where explicit knowledge is available when someone comments on the information (Angeli, Grandi & Grimaldi, 2013). Many studies in the literature explain social media and its impact on consumer buying decision. Furthermore, the research proves that the websites connected to social media are more effective and efficient in tourism marketing than classical marketing tools (Milano et.al, 2011).

Furthermore, researchers found that online travel reviews and ratings have a positive impact on the traveler's confidence during decision making (Gretzel, 2006) and the word of mouth (WOM) generated from the sources that travelers often interact with are more trustworthy than WOM from unfamiliar sources (Mack, Blose & Pan, 2008).

According to Litvin, Goldsmith & Pan (2008), the number of travelers having the disposition to acquire information from social media is gaining momentum in comparison with more traditional marketing practices in which marketers and suppliers provide similar information. It is therefore worth highlighting that such a development cannot be avoided by tourism marketers and it is worthwhile to adopt new practices in line with the market intelligence offered by social media (Blackshaw & Nazzaro, 2006).

Perceived Risk (PR)

PR usually occurs with online financial transaction threats when an actual purchase transaction occurs (Kesharwani & Bisht, 2012). Research shows that PR reflects the consumers' awareness toward the vulnerability they might face when exposing their personal data when seeking information for buying decisions (Cox, 1967). PR is frequently associated with online financial transactions threats (Kesharwani & Bisht, 2012; Ndubisi & Sinti, 2006), especially when the transaction is paired with the actual purchase (Kesharwani & Bisht, 2012).

Research points out that the uncertainty on online transactions occurs due to the lack of visible interaction among consumers, e-retailers and service providers (Al-Gahtani, 2011) and it influences the attitude to use technology negatively (Dinev, Hu & Yayla, 2009). Therefore, it is deemed necessary to highlight the security issues in the context of technological adoption (Tanakinjal, Deans & Gray, 2010). Having said this, PR is also considered an element that significantly influences the attitude to use technology in a negative viewpoint (Dinev, Hu, & Yayla, 2009; Schaupp, Carter, & McBride, 2010; Teo & Liu, 2007).

Electronic Word of Mouth (e-WOM)

e-WOM is referred to as interaction about products and services between users who are interested in the related products or service (Jalilvand & Samiei, 2012). The state-of-the-art technology invention conceived a virtual space known as e-WOM, in which, there is no limit to communication and transfer of information in the world (Cheung & Thadani, 2012; Xia & Bechwati, 2008). Furthermore, digital revolution created a virtual space known as e-WOM and research shows that E-WOM takes place in platforms such as Facebook, travelers' blogs and online forums, especially with the help of portable digital devices like smartphones (Kaplan & Haenlein, 2010). Jalilvand and Samiei (2012) deemed that the effect of e-WOM is strongly rooted in the tourism industry.

With regard to tourism, the contribution of e-WOM has become rapidly active in organizational websites, forums and social networking sites (Sotiriadis & Zyl, 2013; Sun, Youn, Wu&Kuntaraporn, 2006) not forgetting the spreading of e-WOM by means of an important medium such as mainstream social media platforms and tourism-specific e-WOM platforms (i.e., travel blogs, TripAdvisor, and CouchSurfing). The influence of e-WOM has been previously researched with regard to tourism decision making by Jacobsen and Munar (2012) and Sparks and Browning (2011). Furthermore, previous findings indicate that e-WOM is a significant factor to attitude and behavioral tendency in using social media (Fakharyan, Jalilvand, Elyasi& Mohammadi, 2012).

Perceived Usefulness (PU)

PU is defined as a form of mental agreement and trust that an application is useful to accomplish the expectation. Davis and colleagues (1989) defined PU as the perspective embedded in users' minds that their chosen tool was able to enhance their work efficacy. Similar to most technological tools, social media provides access to its users in virtual space where information was readily available at any time. According to Lin (2007), PU for social media sites is defined as the confidence users have towards the feature and capability of social media in capturing the desired information, which fulfilled their requirement, generating desired information for sharing and enrichment, while enhancing their decision making. It is noteworthy that a considerable number of previous studies elucidated the relationship between usefulness and attitude in the field of information systems and technology application (Melendez, Obra& Moreno, 2013).

Perceived Ease of Use

Perceived ease of use is defined as the remarks made by users who are expected to be of worth in system practicality and user-friendly operation (Davis, 1989). Perceived ease of use reflects individuals' valuation of technology usage (Davis, 1989). Furthermore, perceived ease of use in social media sites may reflect the impression the users have towards social media sites, which may assist them to accomplish their objective effortlessly (Lin, 2007). Hence, users may have the tendency to use the innovation frequently if they came to a conclusion that the technology was user-friendly and easy to be operated. Research shows that the ease of use comprised of the feature, structure and user-friendly interaction between the users and service providers, which fulfil the users' expectations and demands, especially in seeking information (Muñoz-Leiva, Hernández-Méndez & Sánchez-Fernández, 2012).

Purchase Decision

Purchase decision is defined as the study of the processes involved when individuals or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs and

desires (Brey, 2008). Research explains that the tourists' travel decision making process is vastly influenced by social media marketing content (Živković, Gajić & Brdar, 2014).

Stepchenkova, Mills and Jiang (2007) held that social media makes it easier for tourists to obtain necessary information, which may eventually help them make travel-related decisions. Furthermore, within the tourism industry, potential travelers want to know the opinion of previous travelers since it assists them in deciding to purchase or rejecting the service (Kaplan & Haenlein, 2010; Sigala, Christou, & Gretzel, 2012). The studies display that social media is an effective tool for marketing in the field of tourism and it needs to be explained and proven that the consumers' travel destination decision-making process is directly impacted by the social media marketing.

Conceptualizing Variable Relationships and Developing Hypotheses

According to the research questions set in this paper, the variables relationship paths have been conceptualized as follows.

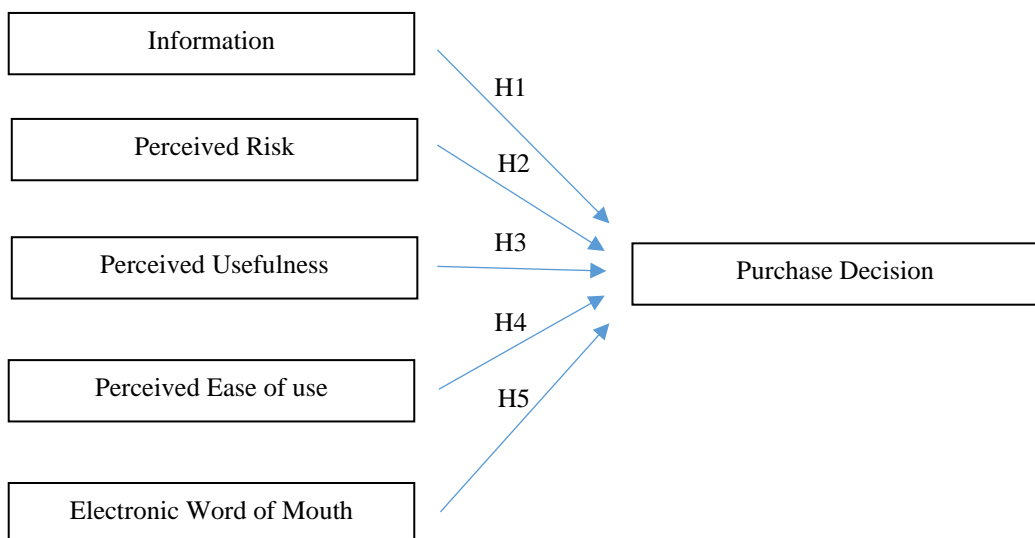


Fig 1: Conceptual Framework

There are five variable relationship paths in this conceptual framework and the dependent variable has been identified as the purchase decision whilst the five dimensions of characteristics towards the purchase decision have been considered as the independent variables. In par with the set relationship paths, researchers have arrived at the following hypotheses:

H1: There is a significant positive relationship between information in social media marketing and purchase decision.

H2: There is a significant negative relationship between perceived risk and purchase decision.

H3: There is a significant positive relationship between perceived usefulness and purchase decision.

H4: There is a significant positive relationship between perceived ease of use and purchase decision.

H5: There is a significant positive relationship between electronic word of mouth and purchase decision.

Methodology: Sample, Measures, Research Instruments and Data Analyzing Methods

Based on the research questions and the researcher's objectives for this study, the study used the quantitative strategy. The target respondents were individuals who used social media as an instrument to select their tourism destinations. In determining respondents who fulfilled the criteria set by the researchers, a question (i.e., whether the respondent used any tourism social media sites to plan for holidays) was set as a filter at the beginning of the questionnaire.

Since the number of tourists who browse through social media sites to select Sri Lanka as a tourist destination is unknown, the sample size has been identified as 384 using Cochran's Formula. A questionnaire was distributed among tourists who arrived in Sri Lanka through email addresses obtained through a booking provider while another set was collected through social media (Instagram) and some responses were obtained by meeting directly. These tourists were given the questionnaire and their responses were collected.

Data Analysis and Discussion on Hypotheses Testing Results

The demographic data analysis shows that most of the respondents who are in the age group of 19-25 are backpackers and most of the holidaymakers are in the age group of 26-40. Only a small number of respondents are luxury travelers and most of them are in the age group of 41-60.

Demographic data shows that most of the respondents who are employed full time are holidaymakers and most of the respondents who are employed part time are backpackers. Also according to the sample respondents female respondents are higher than male respondents. Furthermore, most of the respondents have only 1-3 or 3-5 years of experience in using social media as a source to plan their travel.

A high level of internal consistency was shown through the results found on each factor on the purchase decision. Tested results of Cronbach's Alphas have been given in the following table.

Table 1: Reliability Measures

Scale	No of Items	Cronbach's alpha value
Information	4	0.711
Perceived Risk	2	0.844
Perceived usefulness	2	0.715
Perceived ease of use	4	0.709
Electronic Word Of Mouth	3	0.741
Purchase Decision	3	0.703

Source- Survey data (2019)

The study basically focused on finding the impact of Social Media Marketing in selecting Sri Lanka as a tourist destination. More specifically the study examined how information, perceived risk, perceived usefulness, perceived ease of use and electronic word of mouth impact the purchase decision of tourists who have travelled to Sri Lanka.

Table 2: Pearson's Correlation Analysis

		Information	Perceived Risk	Perceived Usefulness	Perceived Ease of use	Electronic Word of Mouth
Purchase Decision	Pearson Correlation	0.208	-0.108	0.370	0.260	0.318
	Sig.(2-tailed)	0.000	0.035	0.000	0.000	0.000
	N	384	384	384	384	384

Source- Survey data (2019)

Based on the results, it was found that information has a positive relationship with purchase decision and purchase decision is 20.8% influenced by information. Furthermore, perceived risk shows a negative relationship and the impact is 10.8%. According to the study Perceived Usefulness, Perceived Ease of use and Electronic Word of Mouth have a positive relationship with purchase decision and impact is 37%, 26% and 31.8% respectively.

Table 4.1: Coefficient of Information and Purchase Decision

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.616	.284		5.696	.000
	Information	-.117	.061	-.119	-1.925	.055
2	Perceived Risk	.007	.026	.013	.274	.784
3	Perceived Usefulness	.214	.038	.288	5.583	.000
4	Perceived Ease of use	.155	.037	.195	4.186	.000
5	Electronic Word of Mouth	.243	.048	.293	5.043	.000

Source- Survey data (2019)

According to the results of regression analysis, P value of information and perceived risk is more than 0.05 which indicates that the impact is not significant whereas the P value of perceived usefulness, perceived ease of use and electronic word of mouth is less than 0.05 which indicates that the impact is significant.

Managerial Implications and Propositions for the Future Studies

The study argues that purchase decision for tourism destination is heavily influenced by social media marketing interactions and content obtained from this platform. Hence, the results provide tourism and hospitality marketers with a frame of a reference to determine what they need to know and how to implement actions through social media as an effective marketing platform.

Most of the respondents of the survey have indicated that using social media marketing content would make it easier to select travel destination and also, they have indicated that they would find social media marketing content easy to use. So, the social media marketing campaigns should focus on providing easy access to content. Furthermore, the research study

indicates that social media marketing enhances the flexibility of interacting with potential travelers. The study suggests that travelers often read other travelers' social media reviews to know which destinations make good impressions on others.

In addition, when travelers select a travel destination, other travelers' social media reviews make them confident in selecting the destination. So, it is important not only to provide an opportunity to make feedbacks and reviews, but also to display reviews and feedbacks for other travelers to check. Finally, the implications of tourist interactions on social media marketing and their influence on purchase decision could be understood by conducting more detailed studies related to the Sri Lankan context. It is well known that social media marketing will increasingly continue to impact every aspect of the tourism industry in Sri Lanka, and this study only provides a few insights into this important phenomenon.

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The Correspondence between Service Quality Dimensions and Customer Perception during COVID 19 outbreak - An Analysis Across Public and Private Sector Banks in India and Sri Lanka

Kurian S.¹, Ramanathan H. N.², De Alwis C.³, De Alwis A. H. M.⁴ and Thomas B. A.⁵

The Novel Corona virus (COVID19) has forced a slow down across the global economy, and nations have come to a standstill due to the complete lockdown enforced by governments in most parts of the world. The banks may help to slow down the spread of the virus by rethinking of ways to meet the customers' needs in the time of crisis through remote as well as existing channels. The purpose of the paper is to map the customer perception on various service quality dimensions viz., tangibles, reliability, assurance, responsiveness and empathy of the private as well as the public sector banks across India and Sri Lanka during the COVID19 pandemic. The respondents were interviewed in person and also contacted through Google forms to collect the data for the study. The results indicate that customers perceived the services offered by public sector banks to be distinctly different from those offered by private sector banks. This was true for both India and Sri Lanka. The study reiterates the need for these banks to closely monitor the services offered to customers in order to continue enjoying the customer loyalties as well as benefits of competitive positioning of their financial services.

Keywords: Assurance, Reliability, Responsiveness and Empathy, Tangible.

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¹ PGDM, SCMS Campus, Prathap Nagar, Muttom, Aluva, Cochin – 683 106, Kerala. (simmykurian@scmsgroup.org)

² Department of Management Studies, JAIN (Deemed to be University), Kochi Campus. (n.hareesh@jainuniversity.ac.in)

³ University of Kelaniya, Sri Lanka. (dealwisac@gmail.com)

⁴ Faculty of Commerce and Finance, University of Colombo. (dealwisahm@gmail.com)

⁵ SCMS Cochin School of Business. (fk-3353@scmsgroup.org)

Introduction

In the context of the COVID19 pandemic the world economy is affected and banks have a major role to play in slowing down the spread of the disease while continuing to provide customers delight through both remote and existing channels of service. Most banks may require rethinking on their customers' needs and aligning existing services to meet these requirements. The banks may help to limit the impact of the pandemic by helping customers to manage their debt, adjust their finances and spread awareness of government schemes rolled out to support the citizens. In this current scenario of distress, customers may look up to the banks to provide services and products with greater clarity and transparency to suit their needs.

The banking sector in Sri Lanka comprises of 24 licensed commercial banks as well as 6 licensed specialized banks as per a report by Central Bank of Sri Lanka (CBSL, 2020). Among the commercial banks there are two state owned commercial banks while the others are private commercial banks and foreign banks. The Central Bank of Sri Lanka took active measures to ease the burden of the public during this crisis and the banks continued to provide uninterrupted services to its customers. Similar measures were taken by the RBI to provide relief to Indian economy. The banking sector in India comprises of 20 public sector banks and 22 private sector banks apart from foreign banks, regional rural banks, urban and rural co-operative banks (IBEF, 2020). The government and regulatory bodies responded to the crisis by initiating several proactive measures to maintain liquidity and meet burden of commitments. The financial institutions in the country continued to provide seamless services while reducing in-person interactions and downsizing operations.

This study tries to assess and compare the quality of service provided by private and public sector banks in India and Sri Lanka using the five dimensions of the SERVQUAL model, viz., tangibles, assurance, responsiveness, reliability and empathy during the COVID19 pandemic.

The study considered public sector banks as those where more than fifty percent of the stake was owned by the government and private sector banks as those that were privately owned.

Literature Review

The banking industry is largely dependent on customers' satisfaction as it is a heavily commoditized sector where almost everyone provides more or less the same kind of products and services. There is little room for competing on price and customer satisfaction is one of the most important factors that provide competitive advantage to a bank. Customer satisfaction is dependent on the experience that customers may have during their various interactions with the bank. It may comprise of interpersonal services, consistent omni channel experience as well as effective problem solving (Vaslow, 2018). Service quality is one of the main determinants of customer satisfaction (Gupta, 2012).

The SERVQUAL is the most widely used tool to measure service quality (Parasuraman, 1988). While some researchers have proved that service quality has a close impact on customer satisfaction there are others who have used service quality dimensions to evaluate customer satisfaction. As like all other organizations, banks too are more and more obliged in the recent times to offer much more to their customers than their offerings. The emergence of new forms of banking channels like net banking, mobile banking and Automatic teller Machines(ATM), as well as stiff competition in the global markets have forced bankers to consider ways and means to exploit customer loyalty (Ganjinia, 2013). The importance of customer retention as well customer service quality in predicting customer satisfaction has been emphasised by reasearchers (Madushanka, 2015) who have reported that such studies would be useful to service providers in retaining customers.

Various dimensions of service quality have interested researchers as they studied the impact of service quality on customer satisfaction. Literature mentions dimensions like efficiency, responsiveness, reliability, fulfillment, privacy and even brand image as the main dimensions that characterize service quality. In the context of the Sri Lankan banking sector, a study reported that privacy and efficiency dimensions of service quality had a strong impact on customer satisfaction while reliability and fulfillment had a moderate impact. The study made suggestions for improving online banking platforms (Deshani, 2017). Another study which concentrated on online banking facilities provided by commercial banks in Sri Lanka found that perceived value and trustworthiness influenced brand loyalty of professional customers (Wijesundara, 2018). Several studies have applied gap analysis to determine perceived importance and satisfaction on various service quality dimensions like tangibility, reliability, responsiveness, assurance and empathy using the SERVQUAL model developed by (Parasuraman, 1988). One such study focused on two main cities of the western province of Sri Lanka and found that the perceived service quality among customers was higher than their expectations (Perera, 2013).

Similar studies conducted in Indian context have also reported the importance of service quality in predicting customer satisfaction. A study on public sector banks reported responsiveness as the most significant predictor of customer satisfaction while corporate image was reported to have the least influence (Kant, 2017). Yet another study done on private sector banks in India reported that customers looked for responsiveness and tangibles when evaluating banks. The study further found that such banks however gave less impetus to responsiveness than to tangibles (Chakrabarti, 2018). A study which compared public and private sector banks said that knowledge of products, response to need, solving questions, fast service, quick connection to the right person, and efforts to reduce queuing time were found to be the factors that were positively associated with overall satisfaction with regards to private sector banks. While in case of public sector banks, knowledge of products as well as fast service were found to be positively associated with satisfaction (Paul, 2015).

Methods

The main goal of this study was to determine the level of service quality as perceived by customers of various public and private sector banks and compare their perceptions across the two countries India and Sri Lanka by using a structured questionnaire adapted from the SERVQUAL tool. The SERVQUAL questionnaire is a standard 22 item instrument comprising of five raters dimensions. The SERVQUAL instrument is one of the most widely used approaches to measure service quality (Cook, 2002) though the universality of the instrument was questioned by several researchers (Buttle, 1996). The RATER scale could be changed or enriched so to be able to capture all levels of service quality in particular service industry (Parasuraman, 1991). The questionnaires were circulated both physically while interacting with customers visiting the bank and also through google forms. However the researchers ensured that each respondent had more than one interaction with the bank during the last three months in order to avoid collecting the data from the wrong individuals (Newman, 2001). The questionnaire consisted of two sections: the first section contained questions on the demographic information of respondents' while the second section had 18 items where respondents rated their perception on various service quality dimensions like tangibles, assurance, responsiveness, reliability and empathy and a 5-point Likert scale was used, with '1' meaning "totally disagree" and '5' meaning "totally agree". The data for the study was collected between June 2020 and July 2020 from respondents in both the countries. Respondents were requested to be objective in their responses as the data collected through the survey was to be used for statistical research alone. The respondents for the pilot study were contacted personally during their visits to the banks. A series of discussions with the bank personnel as well as conversations with the customers helped the researchers' to gain a better understanding of various customer expectations and perceptions. The survey instrument was adapted to suit the study in the given context. Simultaneously Google forms were created and shared with individuals who were chosen as per the researchers' convenience both in India and Sri Lanka.

The sample size for the two countries was identified based on the variation in the responses to the pilot survey conducted in both the countries. Since the population is relatively infinite, the sample size was estimated by using the following formula $n = \frac{3.92 (\text{Std Dev})^2}{(0.025 * \text{Mean})^2}$. The means and standard deviations were extracted from the pilot study data. The finalized sample size was then distributed based on the proportion of public vs. private bank usage in India and Sri Lanka. Two hundred and forty one correctly filled in responses were received from Indian respondents and another four hundred and seventeen responses were received from Sri Lankan respondents. The primary analysis tool used for the study was correspondence analysis. One of the goals of correspondence analysis is to describe the relationships between two nominal variables in correspondence tables in a low-dimensional space, while simultaneously describing the relationships between the categories for each variable. For each variable, the distance between category points in a plot reflects the relationships between the categories and similar categories are plotted close to each other. Projecting points for one variable on the vector from the origin to a category point for the other variable describes the relationship between the variables.

Analysis and Discussion:

Public sector and private sector bank customers from both India and Sri Lanka were considered for the survey. Majority of them were females contributing almost 60% of the total responses from both the countries. Table 1 depicts gender details of respondents, where 40% of the respondents from India were males and 37.9 % respondents from Sri Lanka were males.

Table1.Profile of Respondents				
Gender	India		SriLanka	
	Frequency	Percent	Frequency	Percent
Male	98	40.7	158	37.9
Female	143	59.3	259	62.1
Total	241	100	417	100

(Source: Primary Data)

Table 2 depicts the spread of responses received from different types of banks. In case of India almost 95% of data was from individuals who banked with public sector banks while in case of the Sri Lankan respondents, 60% of them were public sector bank customers and 38.8 % of them were private sector respondents.

Table2.Type of Bank				
Bank Type	India		Sri Lanka	
	Frequency	Percent	Frequency	Percent
Public Sector	229	95	250	60
Private Sector	10	4.1	162	38.8
Others	2	0.8	5	1.2
Total	241	100	417	100

(Source: Primary Data)

Table 3 represents the qualification of the respondents, 47.3% of respondents from India were graduates while 45.3 % respondents from Sri Lanka were diploma holders and another 36.7 % of them were postgraduates who responded to the survey.

Table3. Qualification				
Description	India		Sri Lanka	
	Frequency	Percent	Frequency	Percent
Diploma/Miscellaneous	90	37.3	189	45.3
Graduate	114	47.3	75	18
Post-Graduate	37	15.4	153	36.7
Total	241	100	417	100

(Source: Primary Data)

Table 4 gives a glimpse of the occupational profile of the respondents. The Indian set of respondents comprised of 26.6% business people, 19% public servants and 33 % working in the private sector. In case of Sri Lanka, 46% of the respondents were from the private sector followed by 28% engaged in public service.

Table4. Occupation				
Description	India		Sri Lanka	
	Frequency	Percent	Frequency	Percent
Business	64	26.6	116	27.8
Public	46	19.1	79	18.9
Private	79	32.8	192	46
Others	52	21.6	30	7.2
Total	241	100	417	100

(Source: Primary Data)

Correspondence Analysis

Two variables used for analysis were ‘service quality dimension’ and ‘type of bank’. The various service quality dimensions considered were viz., tangibles, reliability, assurance, responsiveness and empathy and the type of banks considered were Indian public sector, Indian private sector, Sri Lankan public sector banks, Sri Lankan private sector banks and both Indian and Sri Lankan other types of banks. The table so formed is called the correspondence Table.

The values given in the correspondence Table 5 are called as score or frequency. In Table 5, the respondents have opted ‘responsiveness’ as the attribute that most closely associates with the ‘Sri Lankan public sector banks’. ‘Tangibles’ is the second most sought after attribute among the various service quality dimensions of banks after ‘responsiveness’ followed by ‘assurance’ and ‘empathy’. ‘Indian public sector’ had the highest score for ‘Tangibles’, ‘Reliability’, ‘Assurance’ as well as ‘Empathy’. Majority of the people opted for the service dimensions ‘Tangibles’ and ‘Responsiveness’ and majority of respondents from India and Sri Lanka were public sector bank customers.

Table 5 Correspondence Table

Country	SERVQUAL					
	Tangibles	Reliability	Assurance	Empathy	Responsiveness	Active Margin
India Public Sector	217	160	212	208	225	1022
India Private Sector	10	6	8	9	9	42
Sri Lanka Public Sector	210	50	197	184	238	879
Sri Lanka Private Sector	137	44	130	123	152	586
Active Margin	574	260	547	524	624	2529

*(Source: Primary Data)***Table 5.1 Row Profiles**

Country	SERVQUAL					
	Tangibility	Reliability	Assurance	Empathy	Responsiveness	Active Margin
India Public Sector	.212	.157	.207	.204	.220	1.000
India Private Sector	.238	.143	.190	.214	.214	1.000
Sri Lanka Public Sector	.239	.057	.224	.209	.271	1.000
Sri Lanka Private Sector	.234	.075	.222	.210	.259	1.000
Mass	.227	.103	.216	.207	.247	

*(Source: Primary Data)***Table 5.2 Column Profiles**

Country	SERVQUAL					
	Tangibility	Reliability	Assurance	Empathy	Responsiveness	Mass
India Public Sector	.378	.615	.388	.397	.361	.404
India Private Sector	.017	.023	.015	.017	.014	.017
Sri Lanka Public Sector	.366	.192	.360	.351	.381	.348
Sri Lanka Private Sector	.239	.169	.238	.235	.244	.232
Active Margin	1.000	1.000	1.000	1.000	1.000	

(Source: Primary Data)

Inertia per dimension depicted in table 5.3 shows the decomposition of the total inertia along each dimension. Two dimensions accounted for 71% of the total inertia. Adding the third dimension added

only 14% to the accounted-for inertia. Two dimensions accounted for 100% of the total inertia. Adding a third dimension therefore was not relevant. Thus, only two-dimensional representation was used to depict results.

Table 5.3 Summary

Dimension	Singular Value	Inertia	Proportion of Inertia		Confidence Singular Value	
			Accounted for	Cumulative	Standard Deviation	Correlation
						2
1	.144	.021	.999	.999	.008	.354
2	.003	.000	.000	1.000	.004	
3	.002	.000	.000	1.000		
Total		.021	1.000	1.000		

(Source: Primary Data)

Table 5.4 Overview Row Points

Country	Mass	Score in Dimension		Inertia	Contribution				
		1	2		Of Point to Inertia of Dimension		Of Dimension to Inertia of Point		
					1	2	1	2	Total
India Public Sector	.250	.594	-.041	.013	.612	.138	1.000	.000	1.000
India Private Sector	.250	.019	.078	.000	.001	.488	.692	.242	.934
Sri Lanka Public Sector	.250	-.440	-.063	.007	.336	.318	.999	.000	1.000
Sri Lanka Private Sector	.250	-.173	.026	.001	.052	.056	.997	.000	.997
Active Total	1.000			.021	1.000	1.000			

(Source: Primary Data)

Table 5.4 displays that Indian public sector banks contribute the most to the first dimension, whereas Indian private sector banks contribute the most to the second dimension. The Sri Lankan private sector banks are closer to origin hence cannot be associated with any dimension.

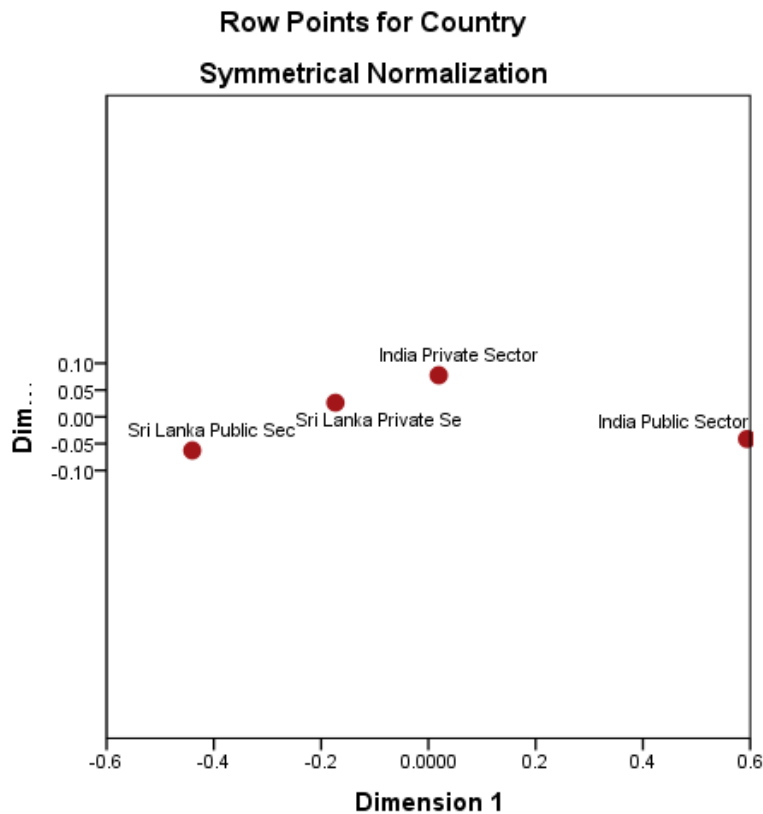


Exhibit No.1 Row Points (Source: Primary Data)

Table 5.5 Overview Column Points

SERVQUAL	Mass	Score in Dimension		Inertia	Contribution				
		1	2		Of Point to Inertia of Dimension		Of Dimension to Inertia of Point		
					1	2	1	2	Total
Tangibility	.200	-.194	.065	.001	.052	.269	.997	.002	.999
Reliability	.200	.730	-.021	.015	.738	.029	1.000	.000	1.000
Assurance	.200	-.123	-.036	.000	.021	.084	.993	.002	.995
Empathy	.200	-.046	.065	.000	.003	.277	.948	.042	.990
Responsiveness	.200	-.366	-.073	.004	.186	.341	.999	.001	1.000
Active Total	1.000			.021	1.000	1.000			

a. Symmetrical normalization (Source: Primary Data)

Table 5.5 displays that 'reliability' contributes a substantial portion to the inertia of the first dimension. Though all the five attributes make very small contribution to the second dimension, 'Empathy' is found to contribute the most to the inertia of the second dimension. The dimensions

‘reliability’ and responsiveness as seen in the Table 5.5 contribute very little to the second dimension and the column points plot shows that reliability, responsiveness and assurance are very close to the origin, indicating that they differ little from the average column profile.

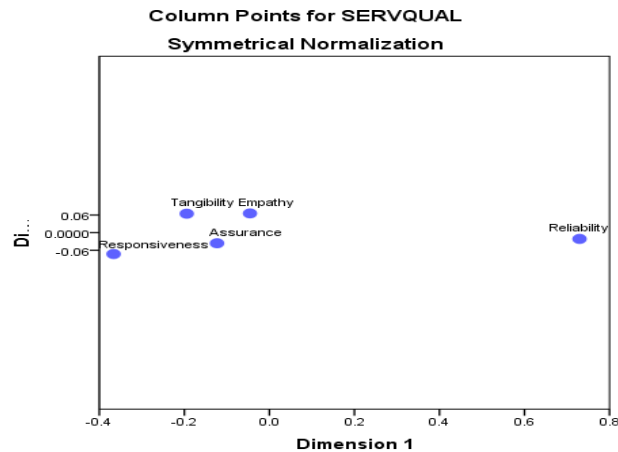


Exhibit No.2 Column Points (*Source: Primary Data*)

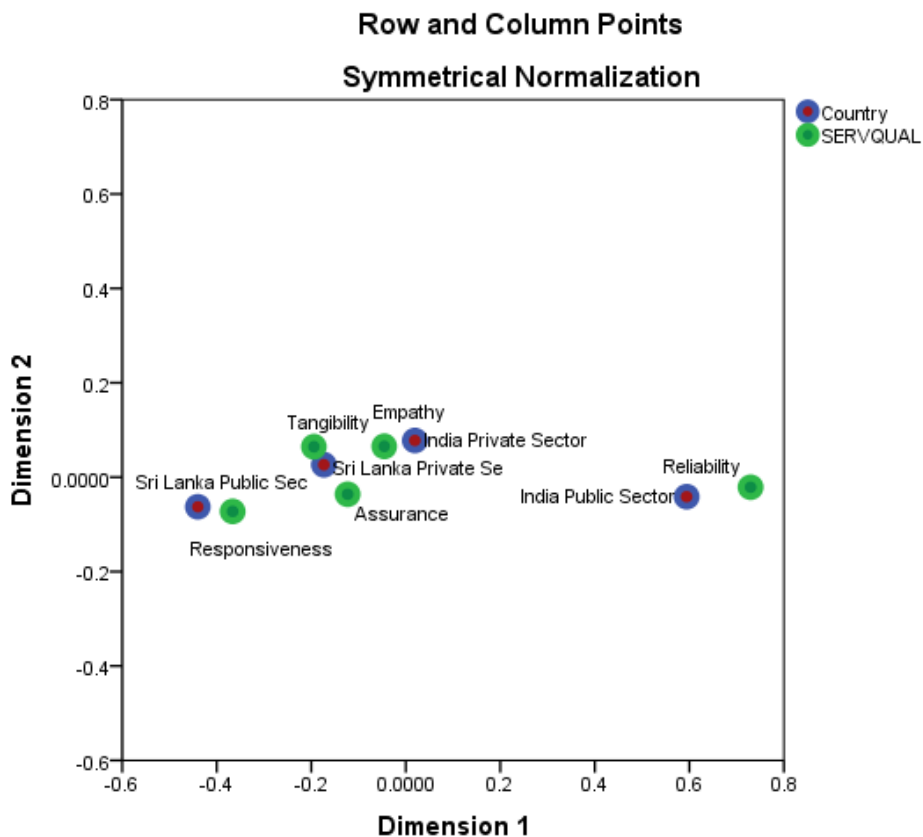


Exhibit No.3 (*Source: Primary Data*)

Different dimensions of service quality have been associated with different types of banks by their customers as seen in exhibit no.3. Majority of the respondents have associated reliability with Indian Public sector banks while responsiveness can be seen to be closely associated with Sri Lankan public sector banks. In case of the Indian private sector banks, empathy is the service quality dimension that is seen to be most closely associated while tangibility and assurance are the two dimensions which lie very close to the Sri Lankan private sector banks.

Discussion and Recommendation

The study found that customers of Indian public sector banks associate reliability with their service quality while the Sri Lankan respondents identified public sector banks with responsiveness. This finding complements the findings from another study which claimed that “responsiveness” was the most significant predictor of customer satisfaction but unlike the findings from the current study it stated an exception that “reliability,” was insignificantly related to customer satisfaction in Indian public sector banks (Jaiswal, 2017). This finding is indicative of customer perception of public sector banks in India in the context of the COVID19 pandemic.

With respect to private sector banks this study revealed that respondents associated their services more with empathy than any other dimension while for Sri Lankan private sectors banks respondents associated tangibles as well as assurance as the two service quality dimensions which were most closely associated with such banks. Therefore there was a stark difference in the customer perception of a bank’s service while comparing public and private sector banks. Similar to the findings of a study by (Paul, 2016), which said that for private sector banks, knowledge of products, response to need, solving questions, fast service, quick connection to the right person and efforts to reduce queuing time were factors that are positively associated with overall satisfaction. On the other hand, in case of public sector banks, knowledge of the product and fast service are the factors which are associated positively and appearance is the only factor that is negatively associated.

The findings of the study may draw attention of banks towards the need to take a closer look into their service quality as offering in order to maintain the competitive positioning of their financial services.

Conclusion

The COVID-19 pandemic could be the gravest challenge for banks in this decade where they may be juggling with the need to prioritize steps to reposition themselves. The situation demands them to rethink on ways to keep their distribution channels open despite the social distancing advice and supervisory compliance functions that were earlier not designed for remote work. The balancing act of managing revenue and meeting customer expectations would be a tightrope walk. The findings of the study streamline a stark difference in the customer perception of services of private versus public sector banks across both the countries. Therefore the study recommends Managers to take suitable measures to ensure that a variety of tangible customer services are offered which are not only reliable but also meet customer expectations of responsiveness, assurance and empathy to aide customers in these times of distress.

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Impact of Innovation and Perceived usefulness on Adoption of Technology in Tourism: A Relational Study

Nayanajith, D. A.G.¹ and Damunupola, K. A.²

Research notion of technology adoption is circumstantial in nature and broadly regarded as a researchable phenomenon across all three sectors of Sri Lankan economic landscape. This research primarily aimed at identifying the relationship of innovation (INO) and perceived usefulness (PU) on adoption of technology in tourism (ATT) in the context of Sri Lanka. Quantitative methods including correlation, ANOVA, ANCOVA, regression, mediation analyses were used through-out the study. Empirical evidence supported positive relationship of INO variable and PU variable towards ATT by correlation analysis and hierarchical regression analysis. Presence of differences in ATT amongst low-income category tourists and higher income category ones, was also supported by contrast test of ANOVA. ANCOVA revealed that the covariate; age was not significantly related to ATT, whereas moderation analysis has demonstrated that the relationship between INO and ATT is being moderated by age. Owing to the time and resource constraints, sample size has been restricted while the research is limited to a quantitative method rather than opt for mix methods for comprehensive study. Originality is that the amalgamation of technology acceptance model's (TAM) perceived usefulness variable (PU) along with an additional variable of INO in explaining ATT, with special reference to present Sri Lankan tourism industry context.

Keywords: *Innovation, Perceived usefulness, TAM, Technology, Tourism*

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¹Doctoral Student, Faculty of Graduate Studies, University of Kelaniya, Sri Lanka. (dagnsrilanka@gmail.com)

² Senior Lecturer, Department of Tourism Studies, Faculty of Management, Uwa Wellassa University, Sri Lanka. (anupama@uwu.ac.lk)

Introduction

Sri Lanka has experienced a setback with regard to the external sector performance of the country in 2018. Escalation of trade and primary income deficits have resulted in significant widening of the current account in spite of considerable flows to the services and secondary income accounts. In this scenario, earnings from tourism has contributed substantially to partially set-off the expanding current account deficit where the tourism industry has recorded growing trends both in tourist arrivals and tourism earnings aspects simultaneously, as against slight decline in workers' remittances (CBSL, 2018). Higher projected arrivals in line with aggressive tourism promotional campaigns and newly constructed high-end tourist hotels will facilitate opportunities to increase tourism earnings. In the meantime, national export strategy (NES) 2018 – 2022 highlighted several concentrated sectors for innovation and export diversification, that includes tourism, rather wellness tourism, as well (NES, 2018). New trade policy (NTP), NES and tourism strategic plan (TSP) all were introduced by the government with a view to address required economic reforms.

In this context, the total number of Sri Lanka Tourism Development Authority (SLTDA) registered accommodation establishments as of 31st December 2019 was recorded as 2,620 (SLTDA, 2020). The number of classified tourist hotels was 155 and among them 26 were five-star hotels. It is noteworthy that classified tourist hotels consist of only 6% accounting for 14,093 rooms. The classification of hotels has been made mandatory now, and steps are being taken to classify the balance unclassified hotels on the fast track. A comparison of tourist arrivals from the consecutive years of 2016, 2017, 2018, 2019 and 2020 January reveals that the total arrivals have gradually increased with varying degrees up to 2018 while a decline of 18% was recorded in 2019 (SLTDA, 2020). Growing purchasing power and demand for travel coupled with increased air connectivity and enhanced visa facilitation could be the driving forces behind the overall growth in arrivals. Despite the decline in arrivals from all source markets in 2019, the trend in declined arrivals from China and Maldives which are among the top source markets is significant. Evolving travel habits of Chinese travellers in their choice of destinations could be an influencing factor in this regard. Further it is noteworthy that tourist arrivals from Russia has recorded a growth of 34% despite the negative impact of Easter Attack in April. In terms of monthly arrivals in January 2020 again a decline of 6.5% was recorded in comparison to January 2019 (SLTDA, 2020). The outbreak of COVID-19 which had negative effect on the travel industry was a critical factor in this regard. Alongside these challenges, tourism industry could accommodate innovations such as online ticket reservations, ease overcrowding with online solutions, providing self-guiding multi lingual devices with GPS to facilitate industry growth considerably (CBSL, 2018).

In this context, research problem could be primarily identified as how do INO and PU affect ATT? Therefore, this research study attempted to identify the relationship of INO and PU on ATT, as the primary objective. Secondly, research attempted to identify whether there are any differences in adoption, based on different income categories of tourists. Demographic variable; age has been used to inquire whether there is a moderation effect of age in between the relationship of INO and ATT. Simultaneously, impact of the covariate; age on ATT also been investigated during the study. Simultaneously, research questions could be noted as what is the relationship of INO and PU on ATT? How do different income categories of tourists affect ATT? What is the effect of age that exists in between the relationship of INO and ATT?

Literature Review

TAM has emanated due to the attempts to develop, Ajzen and Fishbein's theory of reasoned action (TRA). Davis's TAM (Davis, 1989) is applied widely to understand user's acceptance

and use of technology (Venkatesh, 2000). TAM was developed by Davis and Bagozzi (Davis 1989; Bagozzi, Davis & Warshaw 1992). TAM is an adaptation of TRA for the field of information systems. TAM has been used to explain technology acceptance in different sectors such as e-banking, education, tourism, healthcare, agricultural and etc. Previous attempts to extend TAM have following three approaches; incorporation of factors from interconnected models on customer adoption, by means of integrating additional or alternative belief factors, and lastly by examining antecedents and moderators of PU and PEOU (Gayan Nayanajith & Dissanayake, 2019; Gayan Nayanajith 2019b). Based on review of literature following conceptual model was formulated for the study.

PU is the degree of enhancement of a task by a system and PEOU is the effort freeness (Davis, 1989). PEOU significantly affects intention to use mobile tourism applications (Chen & Tsai, 2017). PU / PEOU are found to be positively and significantly related to e-purchase intention in health tourism (Phatthana & Mat, 2011). The impact of PU and perceived cost savings on behaviour intention is greater than perceived enjoyment and PEOU (Hahn, Yoon & Kim, 2014). The findings on sharing system in travel and tourism websites by Noor, Hashim, Haron and Aiffin (2005) are consistent with other TAM research findings, especially on the constructs of PU, PEOU and intentional behaviour. PU, PEOU on intension to use mobile payments in tourism has also been identified (Yang, Zhong & Zhang, 2013). Given the aforesaid facts following hypothesis is proposed,

H₁₁-PU is positively related to ATT

Diffusion of innovation model (DOI) and TAM, explain the intention and then the purchase of online travel tickets (Agag & El-Masry, 2016). DOI and TAM has been combined to explain the usage of travel search engines (Park & Gretzel, 2006). Further, DOI and TAM combined models already been used in relation to travellers' intentions to choose alternative lodging (Qiu, 2015). Hence, following hypothesis is proposed,

H₁₂-INO is positively related to ATT

Personal factors, stimulus and situational factors significantly affect the augmented reality usage intention and destination visit intention (Chung, Han & Joun, 2015). Demographic factors and health tourist satisfaction has already been identified (Doshi, 2008). Age, income and life stage have significant differential and interactive effects on travel behaviour (Kattiyapornpong & Miller, 2009). Consequently, following hypothesis is proposed,

H₁₃-There is a difference in ATT between lower income category tourists and higher income category tourists

Moderating role of religiosity has been researched in relation to online travel purchase (Agag & El-Masry, 2016). The moderating effects of age and gender in the relationship between TAM factors stressed in relation to tourism (Swart, & Engelbrecht, 2017). The effect of moderating context factors in relation to mobile travel services have been identified by the researchers (Bouwman et al., 2011). Accordingly, following hypothesis is proposed,

H₁₄-There is a moderation effect of age on the relationship between INO and ATT

Conceptual Framework

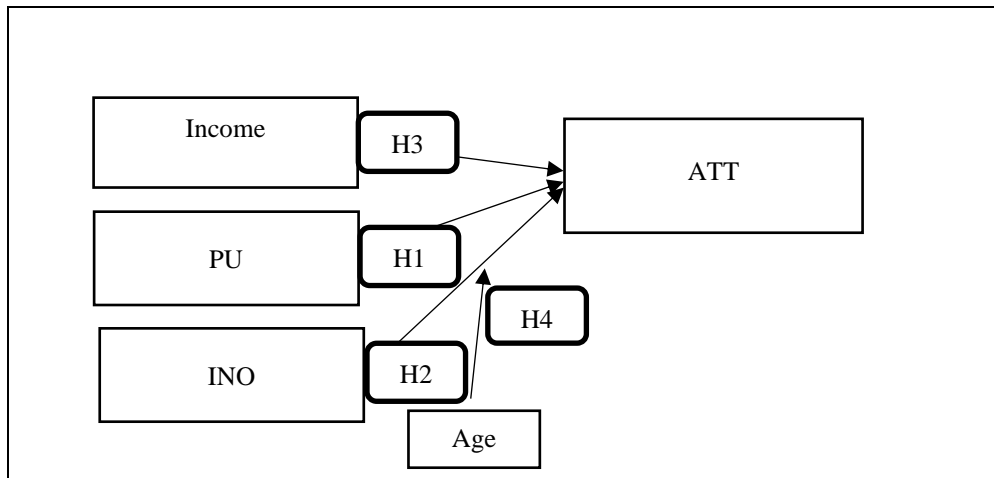


Figure 1: Conceptual model

Source: Designed by the author

Research Methodology

Deductive methodology and quantitative method have been used in the study. Saunders (2011) noted that questionnaires could be used to identify the relationships between variables. Respondents were selected using random sampling method as per hotel booking references (every other tourist who are booking accommodation in particular hotels). Data collection was performed through self-administered questionnaires from the individual respondents. In total 375 questionnaires were distributed and 271 duly completed questionnaires (72%) were considered for the final data analysis. INO is a latent variable and there are several constructs that determine the INO such as relative advantage, simplicity, trialability, observability and etc. Hence, PCA was conducted. Subsequently, reliability analysis was performed using Cronbach's alpha coefficients on INO, PU and also on ATT. Likewise, content validity has been addressed by way of integrating the concerns raised by hotel sector management experts attached to several leading hotel establishments operating in Sri Lanka, into designing the questionnaire. Further, criterion validity and construct validity were addressed by thorough perusal of previous studies and incorporating somewhat similar questions in the process of formation of the questionnaire for the present study (De Vaus & De Vaus, 2013; Saunders & Lewis, 2012).

To determine the relationship Pearson's correlation coefficient used. Regression analysis performed to investigate the coefficients and explainability of the model. ANOVA with planned contrasts used to determine the differences in ATT in different income categories. Trend was determined by ANOVA trend analysis. Covariate effect on adoption investigated by ANCOVA. Similarly, Hayes' process was used to analyse the moderating effect of age in between INO and ATT.

Results and Interpretations

IBM SPSS version 20 with Hayes's process version 3.4 was used for analysis. Initial analysis demonstrated that most of the demographic characteristics of the population are being replicated by research sample. Principle component analysis (PCA) was conducted on the 24 items of INO (Table 01) with orthogonal rotation (Field, 2009).

Table 1: Summary of PCA results of INO items (N=271)

	Rotated factor loading			
	Relative advantage	Simplicity	Trialability	Observability
No. of items	8	8	4	4
Eigen values	7.32	1.91	1.32	1.24
Percentage of variance	31.40	7.91	5.82	5.77

Note: Only the factor loadings over 0.5 given in the table

Cronbach's alpha values were higher than 0.7. Pearson correlation analysis revealed that ATT has a positive relationship with both INO ($r = .775$) and PU ($r = .816$) variables whilst both the relationships were significant at .01 level (1-tailed).

A multiple regression analysis was conducted using hierarchical method to predict the degree to which independent variables; PU and INO impact the ATT (Table 2). In accordance with model 1, the overall variance of ATT explained by INO is 66.5% as per the adjusted R^2 figure. According to the significance value, model 1 is statistically significant.

In accordance with model 2, the overall variance of ATT explained by INO and PU is 77.4% and model 2 is also statistically significant. To determine the cases which are influencing the regression model, case-wise diagnostics were checked and are in order.

Table 2: Regression output

	<i>t</i>	<i>Sig.</i>	\square	<i>F</i> Change	<i>df</i>	<i>Sig.</i> <i>F</i> Change	Adj. R^2
Model 1				881.14	1	.000	.665
(Const.)	26.29	.000	2.108				
INO	29.68	.000	0.621				
Model 2				232.27	1	.000	.774
(Const.)	17.29	.000	1.339				
INO	08.62	.000	0.249				
PU	15.24	.000	0.496				

Dependent variable: ATT

In order to examine the specific hypothesis stated as, there are differences between lower income group and higher income groups, one-way ANOVA with planned contrasts was performed. There was a significant effect of income on ATT, $F(2, 268) = 244.01$, $p < .05$, $\omega = .80$. Secondly, there was a significant linear trend, $F(1, 268) = 459.97$, $p < .01$, $\omega = .78$, indicating that as the income increases ATT also increases proportionately.

Main findings of ANCOVA revealed that the covariate; age was not significantly related to the ATT ($p > 0.05$). Output of the moderation analysis has demonstrated a moderation effect attributable to the significant interaction of INO and age, and in this study the interaction is highly significant, $b = -.23$, 95% confidence interval (CI) $(-.32, -.14)$, $t = -5.09$, $p < .01$, indicating that the relationship between INO and ATT is moderated by age (Table 03).

Table 3: Moderation analysis output as per Hayes's process version 3.4 for SPSS

	<i>b</i>	<i>SE B</i>	<i>t</i>	<i>p</i>
Constant	.53	.32	1.66	.0991
INO	1.05	.09	11.58	.0000
Age	.88	.17	5.21	.0000
INO x Age	-.23	.05	-5.09	.0000

Conclusion and Recommendation

Significance of the research is that the contribution to both the theory and practice perspectives in ATT, particularly in a developing country's perspective by incorporating entwined models/variables on technology adoption and innovation. Data analysis supported all the hypotheses (positive relationship of INO and PU on ATT, presence of differences between lower income group and higher income groups and moderating effect of age in between INO and ATT). Therefore, it is recommended to the marketers of tourism related technology service providers, to capitalize awareness on PU dimension in agreement with innovation aspects such as relative advantage, simplicity and etc., as well.

In today's tourism industry, technology keeps on advancing; nevertheless, it doesn't make traveler's life less complicated due to complexities and usability concerns. Travel related apps are a solution that is accessible on mobile phones/tablets, but those can be a total nightmare for businesses due to the aforesaid. Therefore, it's necessary for reality to catch up with the sci-fi visions of the future, that all starts primarily with a call for simplicity — a return to focusing on the things that really matter. Hence, tourism online service providing companies could save themselves from the problem of technology overload by considering following in line with research findings, when the companies offer online innovative solutions, goal of the innovative technology offering; relative advantage, facilitate simple process and be realistic about the added effort a new piece of technology introduces to the workflow. The more effort something requires, the more complicated it can make the things.

Therefore, research findings are beneficial for the policy makers, tourism application developing companies, tourism web site owners, online travel ticketing companies and hoteliers to execute segmenting, targeting and profiling their customers with the assistance of previously discussed factors along with differentiations on socio-demographic characteristics of individual tourists. It is recommended for future researchers to use mix methods or qualitative methods focusing on different perspectives with a view to add value for research studies in this domain, in time to come.

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Effect of Facilitating Conditions on Intentions and Actions towards Digital Banking Adoption: A Multivariate Analysis

Nayanajith, D.A.G.¹, Dissanayake, D.M.R.² and Weerasiri, R.A.S.³

This research examines the significance of facilitating conditions towards intentions and actions of digital banking adoption in the context of Sri Lankan commercial banks. Sample was drawn from the students of University of Kelaniya, who possess digital banking facilities. Duly completed questionnaires totaling to 268 were considered for data analysis. Unified theory and theory of reasoned action have been adopted and dimensions of the variables were measured by five-point Likert scale. MANOVA, ANOVA with contrast tests and discriminant function analysis were also used as analysis tools. Empirical evidence supported the hypotheses indicating the significance of facilitating conditions whilst specifying the importance of organizational infrastructure, in particular. Restrained sample selection and following only the quantitative method were limitation of the present study. Nevertheless, finding of the particular importance of organizational infrastructure comprising of institutional structure, practices, processes that significantly affect accepting of innovative digital advancements by customers, would be beneficial in uplifting the status of digital banking adoption in Sri Lanka amidst the prevalence of Covid 19 pandemic. Multivariate analysis and incorporation of related models/variables would contribute towards originality of the study. Similarly, future researches could be performed in different contexts viz. country, culture and etc. by integrating interrelated models and variables that elaborate usage and acceptance of innovative technology in view of novel findings.

Keywords: Digital banking, E-services, Facilitating conditions, Online banking, Sri Lanka.

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¹Doctoral Student, Faculty of Graduate Studies, University of Kelaniya, Sri Lanka. (dagnsrilanka@gmail.com)

²Department of Marketing Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka. (ravi@kln.ac.lk)

³ Department of Marketing Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka. (sudath@kln.ac.lk)

Introduction

Services related economic activities expanded by 4.7 per cent in 2018 in value added terms where banking services continued to dominate the financial sector, accounting for considerable 72.5 per cent of the total assets of the financial sector (CBSL, 2019). However, profitability of the banking sector has declined attributable to the escalation of operating costs. In the meantime, CBSL has imposed caps on lending rates which directly affect income and profitability of banks (Economic Research Department, CBSL, 2020). Consequently, this could be addressed by managing operational costs while improving other income sources concurrently by facilitating electronic onboarding whilst promoting digital banking services. Facilitating conditions are one of the vital aspects with regard to digital banking adoption (Ghalandari, 2012; Rahi et al., 2019). Organizational infrastructure comprising of institutional structure, practices, processes and technical infrastructure which encompasses physical IT assets, operating systems & firmware, data storage, security related to IT infrastructure significantly affect accepting of innovative digital advancements by customers (Ghalandari, 2012; Venkatesh et al., 2003).

Primary objective of the study is to identify the significance of facilitating conditions (FC) towards users' intentions and actions on adoption of digital banking (AoDB). Secondly, it is required to identify the differences between three FC groups (FC of organizational infrastructure-FCOI, FC of technical infrastructure-FCTI and control group; no effect of FC-NOFC) towards intentions and actions on AoDB. In conclusion, research problem could be summarized as what is the significance of FC (particularly the FCOI) towards users' intentions and actions on AoDB?

Literature Review

Technology adoption research context encompasses numerous research studies that have been conducted in different study areas such as electronic banking, online learning, e-tourism, automation in agriculture and other related fields (Afshan & Sharif, 2016; Colman, 2015; Nayanajith et al., 2019; Venkatesh et al., 2003). Electronic banking adoption is considered as one of the important research notions in the field of technology adoption in relation to services sector of most of the countries including Sri Lanka given the particular contribution of the banking industry towards the national economy (Nayanajith et al., 2020). Most of the instances, researchers have used innovation aspect, perceived risk, perceived trustworthiness, perceived security of electronic services in comprehending the usage or acceptance of telebanking, online banking and other connected electronic banking services (Chaouali & El Hedhli, 2019; Nayanajith et al., 2019; Rahi et al., 2019). Amongst the variables such as perceived ease of use and perceived usefulness, positive and significant effect of facilitating conditions on e-banking adoption has been identified (Ghalandari, 2012). Perceived enablers for a given task are considered as facilitating conditions and constructs of same could be identified as organizational and technical infrastructure (Afshan & Sharif, 2016). Facilitating conditions are one of the vital aspects with regard to digital banking adoption. Organizational infrastructure comprising of institutional structure, practices, processes and technical infrastructure which encompasses physical IT assets, operating systems & firmware, data

storage, security related to IT infrastructure significantly affect accepting of innovative digital advancements by customers (Ghalandari, 2012; Venkatesh et al., 2003).

Another study found that perceived usefulness, perceived self-efficacy, social influence, relative advantage and perceived compatibility all have a positive effect, whilst perceived risk has a negative effect on behavioural intention to adopt mobile banking services. Furthermore, it was revealed that perceived ease of use, facilitating conditions, perceived complexity, perceived trialability, awareness-knowledge and demographic factors (gender, age, education and income) did not significantly influence behavioural intention to adopt mobile banking in the context of an African country. However, subsequent study conducted in Asia has revealed that perceived ease of use, perceived usefulness, facilitating condition and personal innovativeness in IT have significantly influenced the attitude of mobile internet banking adoption in Malaysia. Additionally, perceived ease of use and facilitating conditions found to have a significant influence on the perceived usefulness of mobile internet banking. Lastly, facilitating conditions and personal innovativeness in IT are significantly influence the perceived ease of use of mobile internet banking among Gen-Y in Malaysian context (Lim et al., 2020).

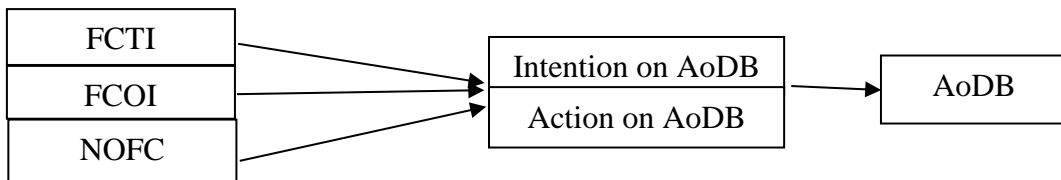
Methods

Deductive methodology and quantitative method have been followed considering addressing of the research problem and the objectives of the present study (Nayanajith et al., 2020). Questionnaire survey was conducted in which the respondents were the students of University of Kelaniya, those who are possessing digital banking facilities of commercial banks whom are representing diverse backgrounds whilst replicating the population of interest to a considerable extent (Khan et al., 2017; Ozlen & Djedovic, 2017). Respondents were selected on random sampling method as per registration numbers. Entirely, 400 questionnaires were distributed and 268 duly completed questionnaires were considered for the final data analysis. Initially, a reliability analysis was conducted to measure internal consistencies of the total scores for each scale through Cronbach's alpha coefficients. As per the findings of calculation of reliability measurements, all the reliabilities for the variables are found to be adequate since Cronbach's alpha values are higher than 0.7 (Blomberg et al., 2008; Field, 2013).

Likewise, content validity has been addressed by integrating concerns raised by the e-banking experts in the three leading commercial banks, into designing the questionnaire. Further, criterion validity and construct validity were addressed by thorough perusal of previous studies and incorporating somewhat similar questions in the process of formation of the questionnaire for the present study (De Vaus & De Vaus, 2013; Saunders & Lewis, 2012).

Theory of reasoned action (TRA) assists in determining the affiliation between attitudes and behaviors (Colman, 2015; Fishbein, 1967). A longitudinal study found unified theory (UTAUT) which includes facilitating conditions variable, accounts for 70% of the variance in behavioural intention towards use and about 50% in actual use (Venkatesh et al., 2003). Accordingly, following conceptual model was proposed,

Figure 1- Conceptual model



Positive and significant effect of facilitating conditions on e-banking adoption has been identified (Ghalandari, 2012). Constructs of facilitating conditions could be identified as organizational and technical infrastructure (Afshan & Sharif, 2016). Consecutively, following hypotheses were proposed,

H₁₁- FC is a significant determinant of intentions and actions towards AoDB

H₁₂- There is a significant difference in FC influenced by organizational infrastructure, as against technical infrastructure

Findings of the Study

IBM SPSS v.20 was used for data analysis. Socio-demographic characteristics pertaining to the sample is in line to examine the research questions as most of the demographic features of the population have been replicated by the sample of the study. Following table 1 shows, descriptive statistics containing the overall and group means and standard deviations for each dependent variable. Means clearly demonstrates that respondents had comparatively higher number of AoDB-related intentions than adoption actions. Similarly, in comparison to control group, other 2 groups have recorded significant number of respondents.

Table 1-Descriptive Statistics

	FC	Mean	Std. Deviation	N
Action	FCTI	3.2860	.27715	81
	FCOI	3.9483	.62791	141
	NOFC	3.6849	.58498	46
	Total	3.7022	.60896	268
Intention	FCTI	3.9679	.60432	81
	FCOI	4.5220	.43311	141
	NOFC	4.1035	.46559	46
	Total	4.2756	.55469	268

Table 2 shows, multivariate test statistics for the group variable and partial eta squared denotes effect size. The group effects are of interest as they depict whether or not the FC had an effect on the AoDB. For these data, Pillai's trace ($p < .05$), Wilks's lambda ($p < .05$), Hotelling's

trace ($p < .05$) and Roy's largest root ($p < .05$), are all significant. As per the results it could be noted that the type of FC had a significant effect on AoDB. The nature of the effect is not clear from the multivariate test statistic. First, the results declare nothing about which groups differed from which and secondly it states nothing about whether the effect of FC was on the AoDB-related thoughts, the AoDB-related behaviors, or a combination of both. In order to determine the nature of the effect, required to refer univariate tests.

Table 2-Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
FC	Pillai's Trace	.285	22.924	4.000	552.000	.000	.142
	Wilks' Lambda	.727	23.769 ^b	4.000	550.000	.000	.147
	Hotelling's Trace	.359	24.613	4.000	548.000	.000	.152
	Roy's Largest Root	.306	42.237 ^c	2.000	276.000	.000	.234

a. Design: Intercept + FC

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Table 3 contains the ANOVA summary table (included figures only for FC, error and total) for the dependent variables. The values of p indicate that there is a significant difference between FC groups in terms of both AoDB-related thoughts ($p < .05$) and AoDB-related behaviors ($p < .05$). These two results lead to conclude that the type of FC has had a significant effect on the levels of AoDB experienced by respondents. The multivariate test statistics led to conclude that FC has had a significant impact on AoDB and the univariate results also indicated the same. Multivariate test takes account of the correlation between dependent variables and so for these data both univariate and multivariate tests had the power to detect group differences. In contrast, the univariate tests are not particularly useful for interpretation, because the groups may differ along a combination of the dependent variables as well.

Table 3-Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
FC	Action	22.586	2	11.293	38.716	.000	.219
	Intention	17.917	2	8.958	36.566	.000	.209
Error	Action	80.506	276	.292			
	Intention	67.618	276	.245			
Total	Action	3927.167	279				
	Intention	5185.930	279				

a. R Squared = .219 (Adjusted R Squared = .213)

b. R Squared = .209 (Adjusted R Squared = .204)

The sums of squares for the error SSCP matrix are substantially bigger than in the model (or group) SSCP matrix, whereas the absolute value of the cross-products is fairly similar (table

4). This pattern suggests that as the MANOVA is significant, it might be the relationship between dependent variables that is important rather than the individual dependent variables, per se.

Table 4-Between-Subjects SSCP Matrix

			Action	Intention
Hypothesis	Intercept	Action	3224.016	3718.329
		Intention	3718.329	4288.431
	FC	Action	22.586	19.091
		Intention	19.091	17.917
Error		Action	80.506	54.571
		Intention	54.571	67.618

Based on Type III Sum of Squares

The residual SSCP matrix includes the variance–covariance matrix and the correlation matrix as well (table 5). In this instance, the variances are quite similar (.292 compared to .245) and the covariances slightly different from zero (0.198).

Table 5-Residual SSCP Matrix

		Action	Intention
Sum-of-Squares and	Action	80.506	54.571
Cross-Products	Intention	54.571	67.618
Covariance	Action	.292	.198
	Intention	.198	.245
Correlation	Action	1.000	.740
	Intention	.740	1.000

Based on Type III Sum of Squares

Table 6 presents contrasts representing FCTI vs. NOFC and FCOI vs. NOFC, respectively. When comparing FCOI to NOFC there are significant differences in intentions ($p = .000$) and actions ($p = .002$). Nevertheless, comparing FCTI to NOFC, there is no significant difference in thoughts ($p = .114$) but there is a significant difference in behaviors between the groups ($p = .000$). Confidence intervals also confirm these findings.

Table 6-Contrast Results (K Matrix)

FC Simple Contrast ^a					Dependent Variable	
					Action	Intention
Level 1 vs. Sig.					.000	.114
Level 3	95% Confidence Interval	Lower Bound	Upper Bound	for Difference	-.583	-.304
					-.215	.033
	Sig.				.002	.000
Level 2 vs. Level 3	95% Confidence Interval	Lower Bound	Upper Bound	for Difference	.096	.266
					.430	.571

a. Reference category = 3

Significant MANOVA test could be followed up using either univariate ANOVA or discriminant analysis (occasionally called discriminant function analysis also) or using both of them. In discriminant analysis, it looks to see how it can best separate (discriminate) a set of groups using several predictors. Table 7 shows the covariance matrices for separate groups. These matrices are made up of the variances of each dependent variable for each group. In all three groups intentions and actions are positively related, so as the number of intentions decreases, so does the number of actions, for the reason that, the covariance is positive. Note that the matrices don't illustrate about the substantive importance of the relationships since they are unstandardized and merely give a basic indication.

Table7-Covariance Matrices

FC		Action	Intention
FCTI	Action	.077	.165
	Intention	.165	.365
FCOI	Action	.394	.232
	Intention	.232	.188
NOFC	Action	.342	.158
	Intention	.158	.217

Table 8 displays the initial statistics from the discriminant analysis. Initially, shows the eigenvalues for each variate, then eigenvalues are converted into percentage of variance accounted for, and the first variate accounts for 85.2% of variance. The canonical correlation could be squared to use as an effect size.

Table 8-Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.306 ^a	85.2	85.2	.484
2	.053 ^a	14.8	100.0	.225

a. First 2 canonical discriminant functions were used in the analysis.

Table 9 shows the significance tests of the variates. When both variates are tested in combination Wilks's lambda has the same value (0.727), degrees of freedom (4) and significance value (.05) as in the MANOVA. Note that the two variates significantly discriminate the groups in combination ($p < .05$), and also the second variate alone is also significant, ($p < .05$). Group differences shown by the MANOVA could be explained in terms of two underlying dimensions in combination and individually by second one, as well.

Table 9-Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	.727	87.857	4	.000
2	.949	14.293	1	.000

Table 10 shows the standardized discriminant function coefficients for the two variates. If the variates can be expressed in terms of a linear regression equation, the standardized discriminant function coefficients are equivalent to the standardized betas in regression.

Table 10-Standardized Canonical Discriminant Function Coefficients

	Function	
	1	2
Action	.599	-1.360
Intention	.472	1.409

The structure matrix (table 11) shows that the second variate differentiates groups by some factor that affects intentions and actions differently, whereas the first variate differentiates groups on some dimension that affects intentions and actions in the same way.

Table 11-Structure Matrix

	Function	
	1	2
Action	.948*	-.318
Intention	.915*	.403

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions

Variables ordered by absolute size of correlation within function.

*. Largest absolute correlation between each variable and any discriminant function

Table 12 shows the unstandardized versions of the standardized coefficients described above. These values are the values of b and these values correspond to the values in the eigenvectors. The values are less useful than the standardized versions.

Table 12-Canonical Discriminant Function Coefficients

	Function	
	1	2
Action	1.109	-2.518
Intention	.954	2.846
(Constant)	-8.184	-2.849

Unstandardized coefficients

The centroids are simply the mean variate scores for each group (table 13). For interpretation, the sign of the centroid is important (positive or negative). Similarly, combined groups plot also could be used.

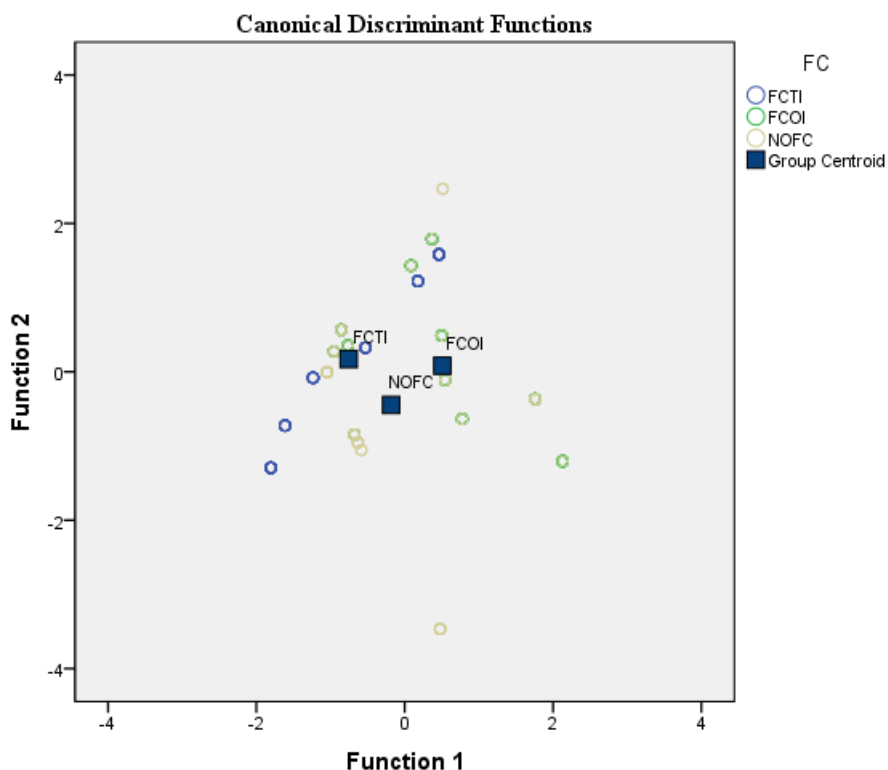
Table 13-Functions at Group Centroids

FC	Function	
	1	2
FCTI	-.755	.172
FCOI	.508	.082
NOFC	-.183	-.446

Unstandardized canonical discriminant functions evaluated at group means

Following figure (Figure 2) plots the variate scores for each person, grouped according to the experimental condition to which that person belonged. Additionally, the previous group centroids are shown as blue squares. The graph and the tabulated values of the centroids depicts that variate 1 discriminates the FCOI group from the FCTI. The second variate differentiates the no-treatment group (NOFC) from the two interventions, but then again, this difference is not as significant as for the first variate.

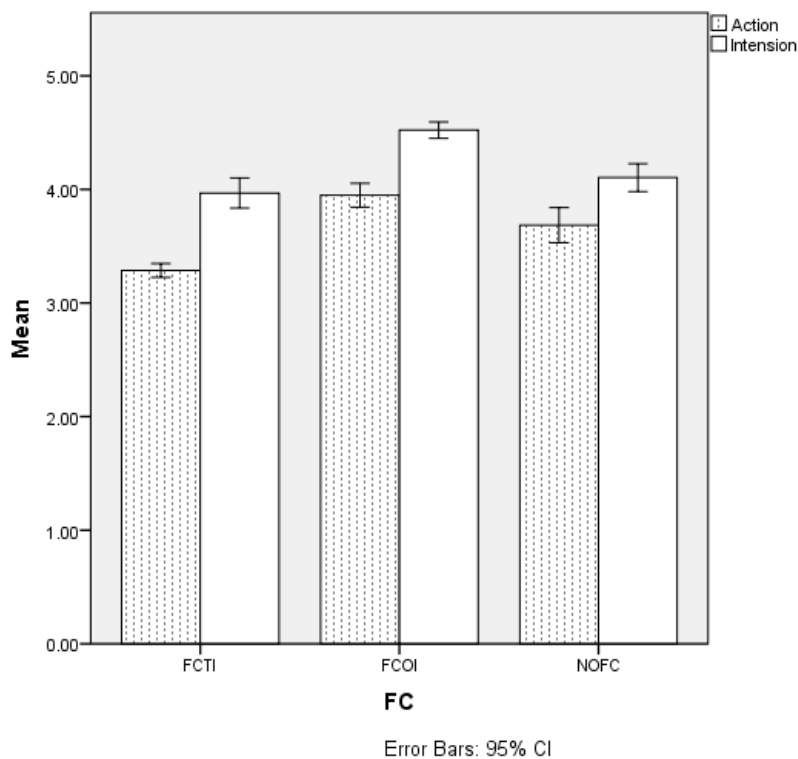
Figure 2-Combined groups plot



As shown in figure 3, means and CIs between the dependent variables in each FC group are shown. Data on mean already given under the descriptive statistics at the very beginning.

Figure shows graphs of the relationships between the dependent variables and the group means of the original data. The graph of the means shows that FCOI increases both the intentions and actions towards AoDB. It was discovered from the discriminant analysis that FCOI and FCTI can be differentiated from the control group based on variate 2, a variate that has a different effect on intentions and actions. Could note that FCOI is better than FCTI and no-treatment group at increasing intentions and actions related to AoDB. Similarly, it was also discovered that FCOI and FCTI could be distinguished by variate 1, a variate that had the similar effects on intentions and actions on AoDB.

Figure 3-Means and CIs between the dependent variables in each FC group



Discussion and Recommendations

MANOVA indicated that facilitating conditions have a significant effect on AoDB and the univariate ANOVAs were also significant, suggesting that this may be in terms of either a combination or individual intentions or actions. Similarly, noticed that FCOI is better at changing both actions and intentions on AoDB. Hence, it was noted that both the hypotheses have been supported by the empirical evidence of the study. Accordingly, control group can be distinguished from the other two groups using the variate that has opposite effects on

intentions and actions on AoDB. Also, the FCOI and FCTI groups can be distinguished by the variate that has similar effects on intentions and actions. Moreover, it was noted that the research findings are in line with the previous research outcomes as well (Afshan & Sharif, 2016; Nayanajith et al., 2019). Further, FCOI is better than both NOFC and FCTI, regardless of whether it's more important to target intentions or actions with regard to promoting digital banking adoption in commercial banks.

There were several limitations such as respondents were limited only to the digital banking possessing students of University of Kelaniya and following only quantitative method for this study. Nevertheless, Findings could be applied in view of uplifting the status of digital banking adoption in Sri Lankan banks. Banks can pay special attention to organizational infrastructure consisting of automated systems, practices, procedures and processes that affects digital banking as the customers recognizes this fact as an important aspect towards AoDB (Khan, 2017; Makanyeza, 2017; Nayanajith et al., 2020).

To explicate further, organizational infrastructure in relation to AoDB consists of the systems, protocols, and processes that give structure to the organization, support its key functions, and embed routine practice. For a financial institution that offers online banking services, infrastructure includes the policies and operating procedures that guide practice and build a shared understanding of how to deliver digital banking services. Infrastructure also includes an agency's systems for operations—from human resources, training, supervision, and ongoing communication systems to data, evaluation, and continuous quality improvement (CQI) systems that significantly affect the acceptance of digital banking in the present research context.

Multivariate analysis and incorporation of vital aspect of facilitating conditions from unified theory, would contribute towards originality of the present study. Future researches could be performed in different country, cultural and social contexts by incorporating related models and variables in quest of novel findings.

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An inquiry into achieving social sustainability from boutique hotels in Sri Lanka

Pathirana M. T.¹, Herath, H. M. R. P.², Scott, N.³ and Gardiner, S.⁴

Achieving social sustainability is a challenge while managing the internal and external pressure in a hotel. In Sri Lanka majority of the boutique hotels has not paid attention to the importance of social sustainability and to its impact of economic sustainability. There is no a proper guiding mechanism to link the society toward the boutique hotels to drive to social sustainability in Sri Lanka as a win-win situation. This paper aims to develop a good practice framework for the boutique hotels in Sri Lanka to drive them toward achieving social sustainability and to explore the internal and external factors that should consider to implement the initiatives to achieve social sustainability. This paper used case study methodology to implement the deductive approach. The author used qualitative data that collected from the interviews from the senior management, employees, guests and community leaders. Data contributed to develop the good guidance frame work. The selected case is an award winning group owned only registered boutique hotel. Research carried over a period of one month and analysed using within data through coding.

The findings revealed the internal and external elements that should be considered when it comes to successful implementation to achieve social sustainability. In addition, most applicable key elements to drive toward social sustainability were identified. All these identified elements were integrated to the proposed good practice framework.

The paper suggests although boutique hotels implement activities to achieve social sustainability a well-placed framework should place a leading role in achieving social sustainability successfully while extending the benefits to the society.

Keywords: Social Sustainability, boutique hotels, Sri Lanka tourism

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¹ British School of Commerce, Colombo. (madura.thiwanka@gmail.com)

² Department of Marketing Management, Faculty of commerce and management studies, University of Kelaniya. (renukaheerath@klc.ac.lk)

³ Adjunct Professor of Tourism Management, University of the Sunshine Coast, Queensland, Australia. (nscott1@usc.edu.au)

⁴ Griffith Institute for Tourism, Department of Tourism, Sports and Hotel Management, Griffith University, Australia. (s.gardiner@griffith.edu.au)

Introduction

Tourism is one of the fastest growing industry sectors in Sri Lanka after the ethnic war in Sri Lanka. Adding more, estimating to grow more in the future. This significant growth has contributed 4.9% to the GDP of Sri Lanka in 2018 (Central Bank, 2019). Today, tourism is earning more than US\$ 4.5 billion annually and contributes nearly 4.9% of foreign exchange earnings to the country and potential to reach US\$ 10 billion worth industry (Central Bank, 2019). Apart from that around 388,487 direct job opportunities were created by the industry in 2019 which was a growth of more than 100% compared to 2009 (SLTDA, 2019a).

Sri Lanka tourism, accommodation sector has been divided into formal sector known as the registered accommodation units and informal sector known as unregistered accommodation units (Ellepola, 2017). Further this formal sector gets identified to four major sub sections by the SLTDA. That is tourist hotels, supplementary establishments and other establishments (SLTDA, 2018b).

Though the formal sector indicated thirty five boutique hotels, this significant growth of the industry has attracted more than three hundred boutique hotels to the industry who have fallen to the informal category. Key reason is to avoid paying taxes and following regulations. Since their involvement for the economy generates a sizable income and opportunities it is very important to engage them to the development of the industry as a collective approach (Ellepola, 2017). Adding more this informal sector is catering to new, vibrant market segments in the target market audience by engaging with the local communities more in direct approaches.

Unlike formal sector boutique hotels, availability of the data for informal sector boutique hotels is lacking. However, recent studies highlighted more than 50% of the tourists prefer these informal sector boutique hotels as accommodation options. For an example if consider the Ella which is one of the emerging destinations, Ella got only a handful of registered properties and the rest of all the accommodation units are in the informal sector. Further, this is getting more strengthened with the involvement of the online travel agents (OTA) such as Booking.com, Agoda, AirBnB etc... Moreover market share for the formal sector brought to a halt of nearly 53% backed with the marginally increasing the occupancy rate. As mentioned by Wettasinghe (2017) this is mainly because informal sector establishments over passing the formal sector using the online booking agents allowing them to reach the target audience more easily and cost effectively. However, addressing the sustainability challenges of this formal and informal boutique hotels in the Sri Lankan context should improve further since it will have influence to the growth of the industry.

1.1 Research Problem

Achieving sustainability in all three aspects from the tourism sector is important because of its influence on the financial and non-financial aspects of the society. And on the other hand sustainability of the society influences tourism development in the Sri Lankan context.

There is a need guidance frame to drive the boutique hotel sector in Sri Lanka for societal sustainability with this rising number of establishments all over the island and due to its high level of societal engagement (Jones, Hillier, & Comfort, 2016). Yet, no academic work empirically studied this context in Sri Lanka. Further, existing literature is now supporting this role to drive toward social sustainability. So a proper study to identify the initiatives to achieve the societal sustainability of the boutique hotel sector in Sri Lanka is needed to direct toward the implementation to achieve it. Therefore, this empirical study developed a significant contribution to the existing knowledge about sustainability from boutique hotels in Sri Lanka by filling the above identified knowledge gap. Study looked at the boutique hotels as an industry to drive Sri Lankan local communities to societies to social sustainability. An

aggregated manner is a comprehensive approach to make the boutique hotels survive in the long-run.

1.2 Aims and Objectives

The aim of the research was to develop a good practice framework to be implemented in Sri Lankan independent boutique hotels industry to achieve social sustainability. The aim of the research was pursued through answering the following research questions,

- What are the internal and external factors that have influenced on implementing societal sustainability in independent boutique hotels industry
- What is the nature of the best practices that can be implemented by independent boutique hotels industry to achieve social sustainability.

Literature Review

Academic aspects of the research will be highlighted in this chapter along with the key theoretical establishment and the model to drive the primary research.

Sustainability

According to the United Nations World Tourism Organization (UNWTO) sustainable development means tourism while considering the future economic aspect, social and environmental impact (UNWTO, 2020). This should be gained by achieving the key requirements of the stakeholders as well especially the level of satisfaction of the tourist by delivering unique experience. Prud'homme and Raymond (2016) define sustainable hospitality as industry development that manages the today's guest without compromising the future guests and at the same time, stakeholders enjoying the benefits.

To achieve a guaranteed long-term sustainability UNWTO specifically mentioned three dimensions to implement continuously with constant monitoring. Since the tourism industry is growing rapidly, firms should identify the competitive edge while delivering a sustainable product to the tourist (Manaktola and Jauhari, 2007).

According to UNWTO (2020) sustainable tourism should:

1. Make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity.
2. Respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.
3. Ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.

2.2 Social Sustainability

The United Nation Global Compact (2020) defines social sustainability as balancing the positive and negative impact on people and society which could create while managing business activities. Adding more, this will be improving the resident quality of life as well (Mathew and Sreejesh, 2016). Key fundamental for this is the trust between the business (Roca-Puig, 2019) and the society that lead to responsible tourism and corporate social responsibility in tourism (Mathew and Sreejesh, 2016).

To achieve this, a balance between the internal processes, structures, human resources, service delivery etc., need to maintain proactively. Timur & Getz (2009) indicated stakeholder relationship is an important element for the business operations. So in that case the company impact on stakeholders could be direct or indirect. If this is managed successfully by the boutique hotels the societal sustainability would occur by creating and maintaining a healthy and liveable society for present and future human beings.

Findings from the researches that have researched about the social sustainability with the tourism development indicating there is a high possibility of quality of the societal aspects get increased with the development of the tourism (Lundberg, 2017). On the other hand, Ridderstaat, Croes, R, & Nijkamp (2016) mentioned there is a positive relationship toward the development of the tourism industry from the quality of life of society. Creating and achieving social sustainability is considered a win-win situation to both society and the tourism sector.

2.2.1 Theoretical Contribution

There are many theoretical establishments to consider when it comes to driving an organization for sustainability. However, as mentioned by Gursoy & Rutherford (2004) the relationship between the tourists and the society are considered as a key factor and a critical issue for long-term sustainability. Therefore, as mentioned by Nair and Choudhary (2018) due to the nature of the tourism industry and the way the industry interacts with the society social exchange theory is the most applicable theory to consider as the theory to govern this research. Social exchange theory indicates that the relationship between the tourist and the society will be influenced by the evaluation and outcomes from either party. The support toward each party and the attitude toward each party will be further influenced from this (Andereck, Valentine, Knopf, & Vogt, 2005). In the tourism sector to maintain a positive inter-relationship between the tourism sector stakeholder, theory suggests conceptual bases for individual level and community level. To achieve the social sustainability at individual level theory suggest to deliver more direct benefits to the individuals (Haley, Snaith, & Miller, 2005). To achieve this at community level theory suggest to consider about the costs and benefits, environmental and social cultural impacts to generate positive attitudes toward the tourism development from community level (Andriotis and Vaughan, 2003).

2.2.2 Key Elements on achieving Social Sustainability

Identification of social sustainability in the context of the tourism industry and accommodation sub industry is vital to drive this research since social sustainability is a broader concept. As mentioned above this research is focused specifically on societal sustainability in the context of Sri Lankan boutique hotels. The key aim of this research is achieving societal sustainability through the boutique hotels operations that are located island wide in Sri Lanka.

Aligning to the above mentioned social exchange theory there are aspects that could achieve through the operations of boutique hotels such as: community involvement and development, social and cultural justice, social responsibility, social capital, social equity, labour rights and human rights (James, 2014). However, Swarbrooke (1999) summarised social sustainability aspects in 4Es. Equity, Equal opportunities, Ethics and Equal partners. Therefore, this case study research will be focusing on these four major elements. Following table 1 summarize the meaning of these elements.

Table 1: **Key elements for social sustainability**

Key elements	Meaning and application
Equity	Treating all the related stakeholders fairly
Equal opportunities	Opening up opportunities to all the related stakeholders
Ethics	Maintaining business ethics throughout the business operations
Equal partners	Treating all the stakeholders equally

Source: Swarbrooke (1999)

2.2.3 Key Model

Case study effort and the commitment to achieve social sustainability is impressive. However, to get a clear picture of the effort and the commitment to develop the most suitable frame for independent boutique hotels framework called “Leading the Sustainable Organization” (LSO) model was selected. By applying the model to the case study, effort and commitment was assessed to redevelop the LSO framework as a framework to achieve social sustainability in independent boutique hotels in Sri Lanka. As developed by Galpin, Joufflas, & Gasta (2014) following figure 1 indicates the LSO framework.

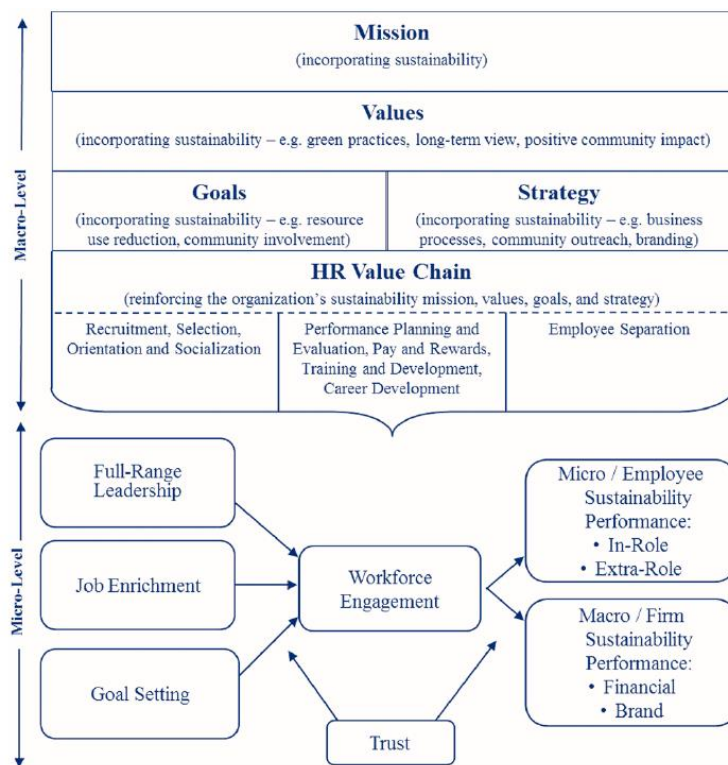


Figure 1: **LSO Framework**

Source: Galpin et al (2014, P. 21)

2.3 Boutique Hotels

Aggett (2017) defines boutique hotels as a differentiated service delivery compared to other accommodation providers in terms of high level of customized service delivery, high level of intimacy and high level of luxuriousness.

As SLTDA (2019b) and Reddot Tours (2020) data shows boutique hotels in Sri Lanka are located in all over the island with range of environmental and sociocultural settings. Adding to this Schubert, Kandampully, Solnet, & Kralj (2010) mentioned hotels that are established in such nature depending on the healthiness of their sites. Like other accommodation options, boutique hotels are not an exception in implementing social sustainable practices to achieve the social sustainability.

Literature indicates in order to implement the sustainable practices in an organization, its organizational culture, leadership, management practices, control and evaluations, financial and non-financial resources, structure and human resources should consider as determinants. This integration need to further aligned with the understanding about the organization capacity under the macro and micro level environmental setting (Galpin, Whittington, & Bell, 2015). However, there is a significant gap in the literature in terms of independent boutique hotels and leading to social sustainability in Sri Lanka as a strategic intervention. Moreover, there is a lack of contribution in Sri Lankan literature that analyse the theme of social sustainability and integrating it the boutique hotel business strategy. Therefore proposing an integrated framework with the good practices is essential and yet remain as a gap in the literature which need to form by sufficiently studying the Sri Lankan context more in detail. In summary a proper framework should provide a guidance to the independent boutique hotels how to integrate above mentioned determinants to drive to social sustainability in long-run.

Methods

Methodology was to examine the case study in terms of applicability of existing models and theories in the context of societal sustainability. Further to ground deductively the findings in the context of boutique hotels in Sri Lanka. Qualitative methodology was selected to have an in-depth understanding about the context (Miles and Huberman, 1994). It is believed through qualitative research in depth understanding could develop about a real world situation with the perception of the respondents (Bettis, Ethiraj, Gambardella, Helfat, & Mitchell, 2016). Since qualitative research is more effective with the case studies with collecting empirical evidence, a case study method was selected. Exploratory research design was used to move ahead with the research. Selected case study is the only registered boutique hotel that is group owned and an award-winning boutique hotel for social sustainability.

3.3 Case study explanation

Case is a boutique hotel that is a part of a chain of hotels. Hotel chain is one of well-known local hospitality brand names in Sri Lanka. Their commitment is evident by identifying their efforts toward sustainability even before sustainable hotel operations came up to the hospitality industry. Adding more, their commitment has been recognised by many international and local recognizing bodies and they have won a number of awards for this commitment. Their effort to sustainability focusing toward six key categories through their sustainability strategy. They are: Energy and carbon, Water and waste, Biodiversity, Community and culture, Family and Sourcing and production. As it shows they are focusing on the three major aspects of sustainability by implementing six key categories. Further, the chain is focusing on continuous development to make the sustainable strategy dynamic to face the macro and micro level environmental challenges. Adding more, to support the sustainability strategy they have formed policies such as: Environment Policy, Energy Management Policy, Human Rights Policy, Zero Tolerance Policy and Food Safety Policy.

3.2 Method of data collection

Data collection was done using multi-method which was proposed by Yin (2009). Extensive literature review was carried out to determine the most applicable social sustainable aspects toward the boutique hotels in Sri Lanka perspective and how to implement those. Themes and patterns were developed based on these aspects for the analysis (Yin, 2009). Furthermore initial codes were also developed based on this literature survey. Three major themes that could facilitate boutique hotels to achieve social sustainability were identified from the literature review. To validate those identified three major themes, primary data were collected from a sample of respondents.

Semi structured open-ended interviews were selected as the data collection instrument for the research. Research instrument was selected to understand the case and the context more in depth by having an open-ended nature of interview structure. This helped to go in detail to understand the possibility of implementing the social sustainability elements and how possible the implementation could take place. Interview guide was developed based on the existing literature in the field of social sustainability and boutique hotel operations. Personal request was sent to the hotel through the head office of the hotel, thereafter, personal invitations were sent to all selected participants to hold the interviews at the hotel.

3.4 Sampling

Purposive sampling case was used to extend the emergent theory to fill the required knowledge (Eisenhardt, 1989). Using that one senior member to represent the management layer and one employee to represent the operational layer from the case study were identified. Using judgemental sampling one guest who was residing in the hotel and one community leader as a resident from the surrounding area was selected. Judgement to select the guest is a local guest who stayed in more than two boutique hotels in Sri Lanka excluding case study hotel. The judgement used to select the resident is who was in the area for more than two years as a community leader, who is having basic education with a family.

3.3 Data Analysis

For the analysis purpose recorded interviews were transcribed verbatim. Once completed, data was analysed using Nvivo 12. Broad themes were identified from the literature and further got confirmed from the evidence if appeared more than twice in the respondents' data. Sub themes were identified within the broad theme if appeared twice in respondents' data. This list of themes were used to develop the initial research model.

As mentioned above coding was done based on the pre identified broad themes and existing literature. Coding helped to align the data set to the theory. As mentioned by Creswell (2013) narrative analysis applied to interpret the data set by re-reading the transcriptions to formulate the codes.

Finally data was compared with the themes and theory to achieve the objectives. For the interpretation purpose quotes from the interviews were used as data display technique (Miles and Huberman, 1994). Within-case analysis was applied to familiar the case in this nature and to allow emerge themes (Eisenhardt, 1989). Data was further analysed to determine the most applicable social sustainable drivers to the independent hotels enabling to identify the patterns from initial research model (Miles and Huberman, 1994).

Findings of the Study

The findings are based on the interviews revolving around how they have achieved social sustainability, impact of social sustainability and what the respondents feel about social

sustainability. Implemented social sustainable elements by the case study hotel were compared with the interview findings from the guests, employees and residents. Emergent themes from the analysis are demonstrated in the below table 2.

4.1 Tentative Broad and Sub Themes

Table 2: Coding evidences

		Case A	Case B	Case C	Case D
Identifying the drivers for social sustainability	1. Equity	10	9	7	4
	2. Equal opportunities	6	7	6	5
	3. Ethics	5	8	9	7
	4. Equal partners	9	3	2	3
		30	27	24	19
Effective social sustainability planning at micro level	Organizational readiness identification	12	14	5	4
	1. Process	4	8	2	1
	2. Staff	3	5	3	5
	3. Structure	4	6	1	3
	4. Culture	2	2	4	5
		25	35	15	18
Effective social sustainability planning at macro level	1. Winning the customer	5	3	4	1
	2. Organizational competency development	1	3	7	1
	3. Innovation and strategic perspective	4	3	5	2
	4. Resource allocation	4	4	2	1
	5. Implementation of the change	2	1	7	2
	6. Feedback collection	2	3	2	1
	7. Risk management	4	2	3	0
	8. Continuation	3	2	1	1
		25	21	31	8

Source: Author's work from primary data

4.2 Common themes explanation

Following is a summary of the common themes that appeared in the interviews as findings.

4.2.1 Identifying the drivers for social sustainability

This theme is supported by four major sub themes and those got confirmed from the emerged elements from the manager's evidence. To ensure the social sustainability as a part of the hotel operations, hotels have made equity (n=10), equal opportunities (n=6), practicing ethics (n=5) and making equal partners (n=9). Managers highly believe the equal opportunities need to be created for all the stakeholders to give equal benefits of hotel operations. So far they have identified youth in the region to develop their skills to be a part of the operational process as human resources, to be a part of their value added services and sourcing. Other than that, they have been in the part of the wellbeing activities of the society with the societal development associations. Safety and wellbeing from and to hotel is not limited to the hotel employees that is getting extended toward the society as well. Apart from that, equal opportunities were given to the employees to develop their career as an hotelier. For this hotel has given opportunities to work in other hotels of the group to develop their skills and capacities. Ethics were implemented by them as a hotel in terms of the business operations as a responsible business entity. As a part of the ethics, they respect the law and order of the country while maintaining honesty and integrity. Creating opportunities and treating them equally is a part of their ethics. Equal partnerships were created starting from the lowest layer to the top. Therefore, society of the hotel also in the part of their partnerships with value added services and sourcing. Employee's evidence indicates that they are highly satisfied with the initiatives the hotels have taken so far to motivate and develop them. They believe that the hotel has given them equal opportunities to grow in their career in the hotel (n=7). To ensure they are getting involved with the process of the hotel they have been treated fairly and equally (n=9). As per the experience the hotel is promoting good business ethics and he believes being a part of that process as an honour (n=8). Interestingly staff families are getting engaged with the hotel process as a part of equal partnership (n=3). For an example evidence indicated souvenirs that sell at the hotel are from the staff families.

Guests are expecting an ethical business process (n=9). In this case study guest has identified ethical business processes with the honesty and integrity that the hotel is maintaining toward the employees, society and to the guests. Since hospitality is a service sector, guests are expecting the motivated staff to receive the service from the hotel (n=7). This was clearly identified and observed by the guests indicating this must be a result of equal opportunities created by the hotel for their staff members (n=6). However, guest is not aware about the fair and equal partnership the hotel is delivering toward the staff, but evidence indicates the satisfaction they have with the society's involvement in the hotel process (n=2).

Resident who got selected for the research was in the region since the case study hotel started its operations. Resident was satisfied with the hotel operations since resident believe the hotel is following the standard good business ethics (n=7). Adding more, he has been a participant of youth and social development programs that the hotel was organizing throughout the last operational years. Among them, health clinics were highlighted. Furthermore, he has been a part of the hotel supply team by being an organic farmer. This was a win-win approach for the farmer and the hotel since the hotel is receiving the organic food supply and the farmer is receiving an economic benefit (n=3). Further the evidence indicated that these equal opportunities need to deliver to the entire society to be a part of the hotel indirectly (n=5). Hotel has not ignored the society or the resident and close relationships are maintained whenever the requirement arises from the societal societies which are a part of the hotel as well (n=4).

4.2.2 Effective social sustainability planning at micro level

Organizational readiness requirement was more prominent from the manager's evidence and employee's evidence. This was determined by (n=12) coding references from manager evidence and (n=14) coding references from employee evidence.

Checking the hotel readiness with regards to implementation of the initiatives to promote social sustainability is important as evidence from the management suggests. Case study hotel having their own procedures to update themselves on hotel readiness to implement such using, existing process (n=4), existing staff (n=3), existing structure (n=4), and existing culture (n=2). In a situation when an initiative about to implement the hotel readiness is checking using those four major elements. This case study hotel measures and compares the existing process to be smooth during the initiatives and believes the process should get value added from the social sustainability activities. Adding more the manager strongly believes staff could be a part of the process or there should be a value addition for their engagement in this process. The internal structure made the hotel possible to work for the social sustainability elements, as it was designed in a way to promote social sustainability. For example, sourcing for the hotel is equally distributed among the village and fair opportunities were created for the youth farmers and other service suppliers of the village. Structure of the hotel at internal and external level supported by the culture of the hotel. However there is a disagreement between the culture at internal and external levels that should be answered at the external level with the importance of social sustainability. All these internal aspects made the hotel award winning property. Guest favourability got increased as the hotel is acting as a responsible entity. Furthermore, brand familiarity increased among the competitors to position as a competitive brand name in the region in boutique hotel category.

Implementing social sustainability aspects from one to another not causing any negative effect to the hotel and staff believe that will improve their work life satisfaction and the reputation in the society since the hotel is looking after the society. However, evidences indicated a clear implementation mechanism is needed to make the initiatives successful and hotel was able to do such with past initiatives by pre identifying the organization readiness from existing process (n=8), existing staff (n=5), existing structure (n=6), and existing culture (n=2). The barriers of being not ready for the sustainable aspects at internal level were identified and answered with the less effective way to the internal aspects of the hotel.

The last health camp that the hotel organized has been able to deliver a good social benefit from the society of the hotel and to the staff as well since staff also participated from this annual health camp. Thus looking after the society and staff as a part of the hotel achieves a higher favourability toward the hotel and its brand name. Apart from that, the hotel has organized career development programs for each employee, fair opportunities were given, respect was given as an employee of the hotel and now the hotel is getting the committed workforce in return.

There are 5 coding references as shown in the Table 2 and all of them are indicating the importance of the hotel readiness identification prior to the implementation of an initiative that is applicable to social sustainability. Adding more, the evidence indicating that the guests are fully aware about the social sustainability aspects as a responsible guest. They prefer to work or to be part of the social sustainability elements, such as respecting the cultural values of the society, respecting the residents etc... In the case of implementing these social sustainability initiatives evidence indicates that guests do not want to see only the awareness campaigns and they want to see the implementation of those activities as they have seen some of the initiatives are limiting only to the awareness campaigns and level of implementation of very low. Evidence shows implementation of these initiatives should base on the implementation capabilities of the hotels and in other words the organizational readiness. They believe a long standing relationship with the social sustainability elements and hotel could be established by checking the existing process (n=2), existing staff (n=3), existing

structure (n=1), and existing culture (n=4). They believe the case study hotel has become an award winning property with the commitment word the above elements the hotel has put prior to the implementation of any event or an initiative.

Since the hotel has implemented social sustainability aspects toward the society positive evidence was identified indicating the readiness of the hotel for such activities (n=4). Resident has participated in many skill development programs, social development programs and he is a part of sourcing partnership as well. He believes he has become a part of this supply chain of the hotel by being an organic farmer due to the pre identification the hotel has carried out at internal and external aspects. Such as existing processes (n=1), existing staff (n=5), existing structure (n=3), and existing culture (n=5). He further believes that identification of these elements were allowed to do innovation and product development even at his level. Further evidence proved this factor by particularly explaining this condition as shown in evidence that most of the value added services, such as Wild safaris, village tours and cooking experiences are too supplied by the village and all the required skills were given by the hotel to improve the standards. This is an indication of equal opportunities given to the society as a part of the property.

4.2.3 Effective social sustainability planning at macro level

The broader theme of identification of the macro level factor for the implementation of the social sustainability elements was highlighted with (n=25) coding references from manager's evidence, n=21 coding references from employee's evidence, n=31 coding references from guest's evidence and n=9 coding reference from resident evidence.

Frequent attention to winning the customer (n=5) is identified as one of the most important elements by evaluating the competitors in the marketplace. Case study hotel have found that this is one of the main factors to attract boutique hotel guests to the hotel. This is also a challenging factor with the competitors in the market place and with their initiatives to develop social sustainability as a winning factor. Moreover, this factor is getting more achievable with the organizational competency development (n=1). Hotel has developed its competencies to accept the local community engagement for sourcing as an example. Innovation is the main method of adopting new initiatives to drive the hotel toward social sustainability (n=3). Organic farming is and turning those to the supply of the hotel is an innovation done to the business process as a part of this. However, resource allocation and reserving the resources is a challenging factor for the hotel (n=4). Hotel management have realised the value of resource allocation for this required change to make it successful (n=5). There have been instances that feedback was collected to all the initiatives to improve those implemented activities (n=2) to minimize the risk toward all the stakeholders (n=4). Hotel have made the process continue with the success rate (n=3).

This theme was supported by the employee as well. There are certain elements that employee focus is high at macro level when implementing the social sustainable practices. Such as resources allocation (n=4) that must be closely monitored regarding how the benefits are getting created from the allocated resources. The final feedback collection from the participating stakeholders is needed as employee highlighted (n=3) to minimize the risk of failing (n=2) and to continue with the good practices (n=2). Employee believe innovation to the process is needed (n=3) to win the guests and other stakeholders (n=3) since the competition in the market place is getting increased. All these have been largely supported to develop the hotel macro level capacities to improve the implementation of those social sustainable elements (n=3).

Maintaining direct contact with the guests has facilitated the hotel for a long term relationship as the guests are expecting practices for social sustainability from the hotel they stay (n=5). Evidence shows that guests expect hotels to implement the activities to a long term

implementation with the capacity the hotel has (n=7). However, to turn this relationship to a long term relationship continuing (n=1) the innovation to sustain the social benefits the hotel is delivering is expected by the guest (n=5). They have built trustworthiness with the implementation of the activities for the social sustainability the hotels have done (n=7). Evidence further confirmed that guests prefer to comment about the activities the hotel has implemented from the revenue they have generated from them (n=2) to minimize the risk and to improve the benefits (n=3).

Residents of the hotel have a very positive mind set about the hotel and its implementation. They believe the hotel has already won the guests and the society as well (n=1). Evidence indicates residents have developed their economic status thanks to the competencies that the hotel has developed for itself (n=1). Adding more, compared to other hotels in the region the way the hotel is interacting with the society believed to be more innovative and successful (n=2) and has allocated resources at the ground level to improve their skills as well (n=1). Implementation was done with the lessons learnt and lessons that are learning (n=2). Residents have been engaging with the hotel for the last ten years and have provided adequate levels of feedback on how to improve and how to engage with many participants from the society (n=1). Finally they are looking forward to a long term engagement with the hotel to drive to the positive aspects of life with the hotel (n=1).

Discussion and Recommendations

5.1 Proposed framework

Following frame (figure 2) was developed as the proposed implementation model to achieve the social sustainability from Sri Lankan boutique hotels. Outcome components of the proposed model build the relationship between the most applicable elements for social sustainability and micro and macro level elements of boutique hotels to a win-win approach (Haley et al, 2005).

Micro level elements refer to the internal organizational aspects to check and measure the hotel capability of implementing the most suitable initiatives for social sustainability. As the model suggests the internal aspects are framed to the blue box covering the processes, staff, structure, culture and the organizational readiness. These need to be measured and evaluated in terms of the proposed social sustainability initiatives. The suggested initiatives could be covering all the stakeholders in terms of equity, equal opportunities, ethics and equal partners to achieve the social sustainability.

Great deal of attention is given to the external or the macro level aspects of the hotel to follow as the steps for the implementation of social sustainability elements. It was evident from the success story (case study) that these are the most applicable elements that a boutique hotel could follow as a good guidance framework to achieve social sustainability. Therefore, prior to the implementation the yellow boxes with the red line (external environment) need to measure and evaluate in terms of the proposed social sustainability initiatives. All these should implement as a process in continuation throughout the business life cycle of the hotel.

As Andriotis and Vaughan (2003) suggest and as social exchange theory explain this model will be able to deliver a win-win situation to all the stakeholder while achieving the social sustainability in long run.

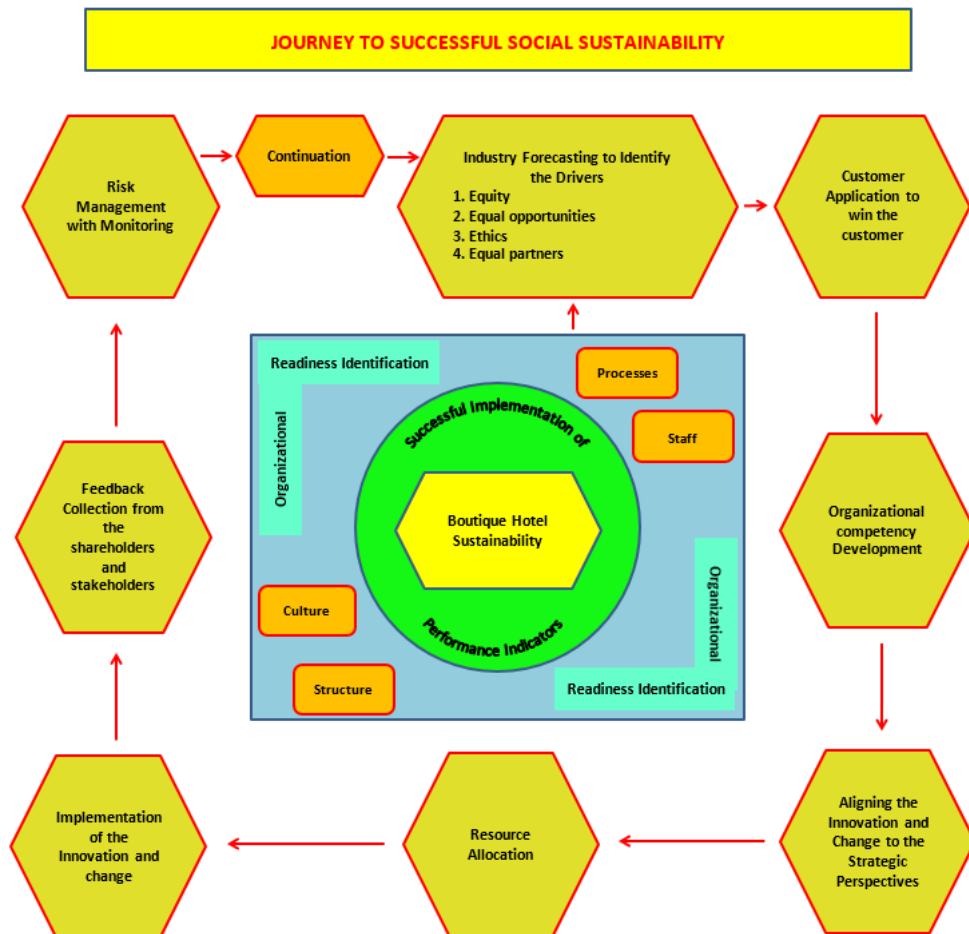


Figure 2: Proposed implementation model

Source: Author's work

The presented model makes a significant contribution to the existing knowledge about driving Sri Lankan boutique hotels toward social sustainability. Adding more, proposed model fills the existing gap of how to implement the social sustainability initiatives. This is not only the factors that affect the implementation of the initiatives to achieve social sustainability, but also the motivation toward the successful implementation as a win-win approach.

Though the proposed model is a comprehensive model it is suggested to test the proposed model with a sample of boutique hotels in the same context to check the validity and applicability of the model as the future research agenda.

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Factors Evaluating the TOE Model of Geo-Information System Adoption by the Sports Authorities in Sri Lanka; An Exploratory Study to Develop a Service Model

Herath, H. M. B. I.¹ and Wanninayake, W. M. C. B.²

The construction of sports information is a unity of individual behaviour and collective behaviour aims to fully respect the right authority of different sports organizations, which is to take measures to implement market mechanisms, and to mobilize the initiative of different sports enterprises conducting the construction of sports information. Geo-Information System (GIS) has been used as an administrative tool or platform to access potential stakeholders in Sports. The purpose of this paper was to determine the factors influencing sports authorities' decision to adopt GIS as an administrative platform in Sri Lanka. The technological, organizational and environmental (TOE) framework was used as the conceptual parameter which is a widely-accepted model for studying IT adoption in organisations. The data collected, through an online questionnaire-based survey that was completed by 32 respondents 'analysis, Bivariate Correlation and Linear Regression exploratory statistical test were used to analyse the data and the proposed hypotheses. The results showed that the environmental context has a significant impact on the adoption of the Sports Geo-information system. Organization and Environment contexts have moderate positive relationships with GIS adoption. Although the organizational context has a significant moderate relationship with the GIS adoption, it does not have any significant impact on the adoption of GIS by sports authorities. Superiors support, employees' innovativeness, and IT experience do not impact on the adoption of GIS at the sports institutions respectively. This would imply that any support and guideline from superiors of the organizations for employees would be very crucial for an adoption decision. Strategic level of the sports organizations need to play an important role to support their employees by providing subjects or practicum training on how to exploit the benefit of GIS for doing smoother sports administration. This paper provides the TOE model as a robust format that can predict the adoption of a Geo-information system as an administrative platform.

Keywords: *Environment, GIS (Geo-Information System), Organization, Technology, Technology Adoption, TOE and Sports Authorities*

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¹Faculty of Graduate Studies, University of Kelaniya, Sri Lanka.
(bharathaherath@gmail.com)

² Department of Marketing Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka (bandara@kln.ac.lk)

Introduction

The modern technology and its tools namely GIS is one of the remote sensing techniques is widely used for administrative purposes. Particularly it helps in planning and management of utilities and resources, versatile cadastre, e-government, e-commerce and for decision making with respect to the management of many other resource management systems (Wijesekera & Peiris, 2008). GIS is a system of hardware, software and procedures to facilitate the management, manipulation, analysis, modelling, representation and display of Geo-referenced data to solve complex problems regarding planning and management of resources (NCGIA, 2018). GIS technology can systematically manage all kinds of geographic data and attribute data, provide a variety of query, display, analysis, statistics, and graphic output function (Cheng & Guo, 1999). The introduction of GIS, along with the combination of sports information together with the geographical environment, enables the exact description of all kinds of regional sports information (Cheng & Guo, 1999). The world of sport is naturally very dynamic and the use of information technology is one of the developments that have made a significant impact on many modern day sporting disciplines and organisations (Nhamo & Magonde, 2014). The development level of Sports Informationization can reflect the overall sports strength of a country (Cheng & Guo, 1999). Thus, compared with major Western developed countries the Sri Lankan sports informationization still has a significant gap in terms of scale, and development level. In 1966 “Sports” was identified as a subject under the Ministry of Peoples Services and the year 1967 Hon. V.A. Sugathadasa was appointed as the first Minister of Sport (MOS Corporate plan, 2019). Subsequently by Gazette (extraordinary) No. 20/1650 dated 30th April 2010 this Ministry came into being as the Ministry of Sports (MOS Corporate plan, 2019). The Ministry of Sports is a democratic institution established under legislative powers vested in the constitution of the Democratic Socialist Republic of Sri Lanka to implement policies, plans and programs in respect of Sports, encouragement and development of sports, improvement of Sports Education, development of sport and recreation infrastructure (MOS Corporate plan, 2019). The Sports Law Act No 25 of 1973 provides an outline of the structure of sport promotion organizations; National Olympic Committee, Fifty two (62) National Sports Federations and Associations.

As per the performance review document submitted by the Ministry of Sports to the Parliament in 2018 has been clearly mentioned that considering the development of sports as a whole in an independent manner, the stability or the unstoppable progress in sports is not at all satisfactory and observed many reasons as the ministry of sports and the department of sports do not have a comprehensive integrated active and practical system, the players do not get the opportunity to involve with their relevant sport on a regular basis due to internal crisis and conflicts within the sports federations and irregular distribution, weakness in handling and maintenance of the infrastructure facilities associated with Sports which are provided on an Island wide basis (MOS annual performance report, 2018). Thus the sports authorities in Sri Lanka have realized the requirement of information system platform like GIS.

Previous studies have examined the factors that have had an influence on the adoption of GIS. However, there have been few studies that have explored the use of GIS as an information platform. Another objective of this study was to investigate the factors influencing of the TOE framework for level of adoption as an administrative platform by the sports authorities in Sri Lanka. Therefore, GIS has been used as an administrative tool or platform for them to access potential stakeholders in Sports. This research aimed to determine the factors evaluating the TOE of GIS adoption by the Sports Authorities in Sri Lanka; An exploratory study to develop a service model.

Literature Review

Geographical Information System & Sports Administration

A geographic information system (GIS) is a framework for gathering, managing, and analysing data, it's rooted in the science of geography. GIS assimilates many types of data to analyse the spatial location and organizes layers of information into visualizations using maps and 3D scenes (www.esri.com, 2020). Thus, this unique capability, GIS discloses deeper understandings into data, such as patterns, relationships, and situations to help users make smarter decisions.

Over the past few years, the game and the business of sports has changed exponentially (Narain, 2017). Thus, it is not about winning or losing anymore but about the statistical and geographical analysis and the planning of future game strategies accordingly. According to Narain (2017) Geographic Information Systems (GIS) is being effectively used to identify characteristics, patterns, movements of players and it is actively being used in the business of sports which involves selecting stadium locations to managing security at sporting events (Geospatialworld.net, 2017).

The construction of sports information is a unity of individual behaviour and collective behaviour, it aims to fully respect the right authority of different sports organizations, which is to take measures to implement market mechanism, and to mobilize the initiative of different sports enterprises conducting the construction of sports information (Cheng & Guo, 1999). At the present time, the application of GIS in sports information is very limited, and the relevant research findings are not many in this Sri Lankan context. Hence, this research has an important validity to investigate the GIS adoption by the Sports Authorities as an administrative tool in Sri Lanka.

The Technology-Organization-Environment (TOE) Framework

TOE is a widely-accepted model for studying IT adoption in organisations (Rahbi, 2017). It was initially developed by Tornatzky, Fleischer and Chakrabarti (1990) as a theoretical framework to predict the adoption of various forms of IT innovation (Thurasamy et al., 2009). Subsequently, it has been extended and developed by Oliveira and Martins (2010); Srivastava and Teo (2010); Yee-Loong Chong and Ooi (2008); Pan and Jang (2008); Kuan and Chau (2001); Chau and Tam (1997) (Rahbi, 2017) in further studies. Thus, as a valuable analytical framework (Oliveira and Martins, 2008), TOE has comprehensive applicability and exploratory power that is useful in order to study a wide range of technological adoption (Baker, 2012). It has been viewed as an ideal theoretical framework for predicting and explaining the adoption of any given technology (Ndekwa and Katunzi, 2016; Yeboah-Boateng and Essandoh, 2014; Ramdani, Chevers and Williams, 2013). Since its beginning in 1990, TOE has been used in different contexts, in developed and developing countries (Rahbi, 2017), to study the adoption and application of various technologies. Also it has been used to study adoption of cloud computing (Gangwar et al., 2015; Alshamaila, Papagiannidis and Li, 2013), e-commerce (Rowe, Truex and Huynh, 2012; Ghobakhloo, Arias-Aranda and Benitez-Amado, 2011; Al-Qirim, 2007), e-business (Wen and Chen, 2010), and enterprise applications systems (Ramdani, Chevers and Williams, 2013). The TOE framework has emerged as a well-established and a robust framework to analyse different internal and external factors that influence the adoption of different types of Information systems in different contextual setting (Abeyasinghe and Alsobhi, 2013).

Technology context of the TOE

This context defines existing technologies in the organisation as well as the pool of technologies available in the market (Roger, 2010). Many researchers have claimed the importance of a set of technological features on the adoption process (Rahbi, 2017). Rogers (2010) identified five attributes of technology that may have an influence on the decision to adopt or reject a given technology in organisations: relative advantage; complexity; compatibility; trialability; and observability (Rahbi, 2017). These attributes, which represent the essential pillars of Roger (1995) Diffusion of Innovation theory, have been widely examined in the IT adoption literature (Ramdani and Kawalek, 2007), and are the essential factors in the technology context of TOE.

Organisation context of the TOE

Organisation characteristics, the second set of determinants in the TOE framework and it has been impacted the adoption of new technologies. The four organisational factors that have been extensively examined are: enterprise size; top management support; CEOs' innovativeness; and prior IS experience (Rahbi, 2017).

Environment context of the TOE

The environment context represents the third set of factors in the TOE framework that has been identified to impact the adoption of Information systems. The IT adoption literature proposes that observing in to the environment helps to understand ICT acceptance within the types of businesses (Kapurubandara and Lawson, 2006). In fact, it is believed that the arena in which an enterprise operates represents a primary stimulus for the adoption of innovations as organisations respond to changes in the external environment (Alshamaila, Papagiannidis and Li, 2013; Damanpour and Schneider, 2006; Kapurubandara and Lawson, 2006). Several environment factors have been identified as affecting an organisation's decision to adopt new technologies, including; competitive pressure; industry type; Government direction or market scope; external IS support; and customer pressure (Alshamaila, Papagiannidis and Li, 2013; Damanpour and Schneider, 2006; Kapurubandara and Lawson, 2006).

Based on the above empirical evidences the conceptual framework for the study was developed in the path diagramme given in the figure 01.



Figure 1. The conceptual framework and measurement model

Hypotheses

This section provides a description of each TOE context and the hypotheses defining the relationships between model constructs. The model relationships between independent and dependent latent variables are designated as positive or negative

The technological context represents attributes of the information system that may influence adoption and includes the availability of those requisite technologies both inside and outside the firm (Tornatzky et al., 1990; Zhu et al., 2010). Perceived or expected benefits describe the advantages a firm anticipates procuring through the adoption of a new IS innovation over the current systems or processes in use (Chwelos et al., 2001).

H1: There is a relationship between Technological context and Adoption of GIS

H2: The technological context has significantly impact on the adoption of GIS

The organizational context reflects characteristics of the firms such as size structure, organizational readiness, and climate (Chau and Tam, 1997; Zhu et al., 2010). It can also comprise managerial structure, the degree of centralization, resources and communication processes which serve to impact or influence an organization's adoption of an innovation (Oliveira et al., 2014). Within this context, Researcher examines a construct that reflects the organization's attitude towards the adoption of a new innovation.

H3: There is a relationship between Organizational context and Adoption of GIS

H4: The Organizational context has significantly impact on the adoption of GIS

The environmental context reflects the external environment in which the firm functions and includes competitive market and controlling forces. It can also include the availability of organizations external to the firm with specific expertise to assist in IS adoption (Zhu et al., 2010).

The main purpose of the study is to examine the relationship and impact of technological, organizational and environmental factors on organizational adoption of GIS for sports authorities?

H5: There is a relationship between Environmental context and Adoption of GIS

H6: The Environmental context has significantly impact on the adoption of GIS

Methodology

'Paradigm' is used to mean the philosophy of a specific piece of research, and is viewed by Johnson and Onwuegbuzie (2004) as being the research culture, representing a set of beliefs, values and assumptions about the nature and conduct of research. The positivistic approach has been applied for this quantitative research and it is going through the deductive process. Items for measuring the TOE model was adapted and modified from the previous studies of Ahmad et al., (2018). All items were going be measured using a five-point Likert-type scale (ranging from 1 = strongly disagree to 5 = strongly agree). The population for this study was the administrative staff who attached to the sport's governing bodies in Sri Lanka. Based on the purposive sampling method, an online questionnaire sent to the respondents using Google forms as the data collection tool. The intendant sample size was 32 respondents were representing the above population and unit of analysis was the administrative officer under the different sports authorities in Sri Lanka. The IBM SPSS 26 package was employed for data analysis, Bivariate Correlation and Linear Regression exploratory statistical test were used to analyse the data and the proposed hypotheses.

Findings

Samples profile

Both male and female respondents were equally representing and the highest category of age was above 50 years as 40.6% followed by 30-40 years and 40-50 years as 34.4% and 25%. The middle management was the highest management category level of the sample which had 40.6% respectively followed by Top management and Junior Management as 31.3% and 28.1%. The highest respondents were representing the Institutions under the Ministry of Sports (43.8%) and Sports federation (43.8%) equally followed by the Ministry of Sports (12.5%). Also the major category of respondents have Post-graduate qualifications (43.8%) followed by the Degree, Other Qualification and Diploma holders were representing as 21.9%, 18.8% and 15.6%.

Measurement model

Reliability analysis was done to measure internal consistencies of the total scores for each scale through Cronbach's Alpha Coefficients. The calculation of reliability measurements is presented in table 1. As per the findings, all the reliabilities for scales are found in between excellent and good level based on the following continuum according to George and Mallery (2003), Cronbach Alpha > .9 – Excellent, \geq .8 – Good, \geq .7 – Acceptable, \geq .6 – Questionable, \geq .5 – Poor, and < .5 – Unacceptable).

Table 1 – Reliability analysis for the Scale

Scales	No.of Items	Cronbach's Alpha	Mean	SD
Technology	15	0.894	3.8042	0.57969
Organization	09	0.772	3.6563	0.58819
Environment	10	0.877	3.6563	0.73920
GIS Adoption	04	0.842	4.255	0.54993

Source: Survey Data 2020

According to the descriptive statistics given in the table 01, the technology scale has a moderate level (M=3.80, SD=0.579). In addition to descriptive statistics, the researchers assessed other scales under the independent variables, Organizational and Environment were having a moderate level as (M=3.65, SD=0.588) and (M= 3.65, SD = 0.73). GIS adoption scale has positive level of mean value on the descriptive statistics as (M=4.25, SD= 0.5499).

Table 2 - Correlation Matrix. Source

	Tech	Org	Env	ADOP
Tech	1			
Org	.396*	1		
Env	.434*	.620**	1	
ADOP	.212	.368*	.603**	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Survey Data 2020

The researcher has conducted the Correlation analysis to explore the positive or negative relationship between the independent and dependent variables based on the Hypotheses one, three and five. Further findings have revealed that in the first hypothesis test as no relationship

between the technological context and GIS adoption, third hypotheses concluded that a moderate positive relationship between the organizational context (0.368) and GIS adoption and also it is statistically significant at 0.05 level. Finally in the fifth hypothesis, the environment context showed a strong positive relationship (0.603) with the GIS adoption, and also it has a statistical significant at 0.01 level.

Table 03 - Regression models on Technology, Organization, Environment contexts and GIS adoption

Explanatory Variables	β Value – GIS Adoption
Constant	2.752 (4.310)
Technology	-.061 (-.358)
Organization	.003 (.016)
Environment	.627 (3.159)
R Square	.367
Adjusted R Square	.299
F-Statistics	5.404
Sig.	.005
Number of Observations	32

Source: Survey Data 2020

The above statistical interpretations have revealed that technological context negatively relate to the GIS adoption of TOE model. As β values and t- statistics imply, judging from the strength of the influence of each independent variable on the GIS adoption by the sports authority in Sri Lanka. The R-Square value has been revealed that TOE variables were representing 36.7% of the model and it was not statistically significant on model fit. Also further findings revealed that two aspects (Technology and Organization) of TOE model were not significant explanatory variables on GIS adoption and it had less P-values than the 0.05 Alpha value. Therefore it was evident that the present technological and organizational influences were not impacted for GIS adoption by the sports authorities in Sri Lanka. As per the above findings, Ordinary least square regression model has been developed as follows.

$$\hat{Y}_e = 2.752 + 0.467 \text{ Environment}$$

Discussion

This study attempted to investigate the factors influencing Sports authorities' decision to adopt GIS (Geo-information system) in Sri Lanka. The findings from the study revealed that the organizational and environment contexts have significant positive moderate and strong relationship with the adoption of Geo-information system. Moreover, only the environmental context had a significant direct positive impact on sports authorities' adoption of GIS information system. The findings were consistent with the results from previous studies that had examined the adoption of other types of ICT systems (Ahmad et al., 2018; Gutierrez et al., 2015). This could be interpreted that Sports authorities in Sri Lanka have been pressurized from the environment for adopting IS systems as administrative platforms for their operations. The relative advantage, complexity, compatibility, trialability, and observability have all been found not to be significant technological factors in determining the adoption of GIS by Sports authorities. This could be interpreted as sports authorities not believe that adopting GIS would

enhance the administrative performance of their operations. Another would have been impacted on this result as the techno-literacy of the employees under sports institutions and the technological complexity & compatibility. This finding was consistent with previous research (Ahmad et al., 2018).

The one only factor directly influencing sports authorities' adoption of GIS as an administrative platform was the environmental context. The advance of Internet technology and information systems have dramatically changed organizational operations and employee behaviour. According to Narain (2017) Geographic Information Systems (GIS) is being effectively used to identify characteristics, patterns, movements of players and it is actively being used in the business of sports which involves choosing stadium locations to managing security at sporting events (Geospatialworld.net, 2017). Competitive pressure is also an important factor to drive sports authorities to adopt Geo-information system. As such, competition, local and international sports event organizers and social pressure have been found to be significant factors in determining the adoption of Sports Geo-information system. The organizational context had a significant moderate relationship with the GIS adoption but it did not have any significant impact on the adoption of GIS by sports authorities. Superiors support, employees' innovativeness, and IT experience could not be impacted on the adoption of GIS at the sports institutions respectively. This finding conformed to previous studies (Gutierrez et al., 2015). According to Karunaratne & Wanninayake (2018) confirmed this type of behavioural impact on the research of consumer ethnocentrism and purchase intention for powdered milk brands available in Sri Lanka. This would imply that any support and guidelines from superiors of the organizations for employees would be very crucial for an adoption decision. Strategic level of the sports organizations need to play an important role to support their employees by providing subjects or practicum training on how to exploit the benefit of GIS for doing smoother sports administration.

Conclusion & Recommendations

This study offered a new insight into the factors affecting the adoption of Geo-information system as a sports administrative platform by Sports authorities in Sri Lanka. The proposed TOE model in this study provided a more comprehensive framework to understand the adoption of GIS in the Sports administrative context. However, there were a few limitations. Firstly, data collection was limited to few institutions under the Ministry of Sports Sri Lanka. Therefore, the findings should be carefully generalized for all sports authorities in country. Secondly, samples size also not enough to generalize the outcome of this research for making crucial managerial decisions on GIS adoption for sports administrative purposes in Sri Lanka. Therefore, future research could contribute to ascertain the generalizability of the findings by testing the proposed research model in other independent sports institutes (62 sports federations) or fields of study. Lastly, while a quantitative survey strategy was chosen for this research, future research studies could also use other sophisticated statistical analysis methods; such as structural equation modelling, multiple regression and so on for an analysis. Furthermore an in-depth interview would be recommended to provide further insight as for qualitative or mixed method studies.

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Readiness to Adopt M-Learning Solutions as the Training Platform among Corporate Companies in Sri Lanka

Velananda, Y. L.¹ and Wanninayake, W. M. C. B.²

Employees in corporate companies are frequent travelers and have insufficient time to participate in regular physical training. Thus, looking for a revolutionary technology era where they can learn at anytime, anywhere. The mobile technologies and mobile devices are attached to employees' daily lifestyles. Hence, the best solution is the use of mobile learning as the training platform to enhance employee skills and knowledge. This paper examines the readiness to adopt M-Learning solutions as the training platform for corporate companies in Sri Lanka concerning the factors Perceived Ease of Use, Perceived Usefulness, Personal Innovativeness, Performance Expectancy, Social influence, Self-Management of Learning. The factors were based on Technology Acceptance Model, Unified Theory of Acceptance and Use of Technology and several other factors from the literature. The report discusses the problem statement, objectives and literature review. Specific attention was made to Sri Lankan context in explaining the current practices. Then factors were analysed based on data collected from 132 participants from 30 corporate companies using a survey questionnaire. Data were analysed using Cronbach's Analysis, Pearson's Correlation Coefficient and ANOVA. Based on the results, critical success factors were identified and the framework was developed. Finally, the recommendations were given, and the future research was discussed. The Perceived Ease of Use, Performance Expectancy and Self-Management of Learning were found as the critical factors which influence improving usage of mobile learning. The educational institutions and software development companies should focus on these factors before adopting the learning method and developing educational frameworks. Researchers can focus on M-learning targeting other professions and industries.

Keywords: *Conceptual Framework, M-learning, Technology Acceptance Model, Training Platform, Unified Theory of Acceptance and Use of Technology*

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¹ Faculty of Graduate Studies, University of Kelaniya, Sri Lanka (yashodabest@gmail.com)

² Department of Marketing Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka (bandara@kln.ac.lk)

Introduction

According to Harun (2001) learning may be a prerequisite for the survival of people, organizations and nations enfolded within the current environment of chaos and most academics and professionals would go on to share a similar sentiment. Denton (1998) pointed out that the ability to train and cross-train its workforce in order to cope with and meet the challenges posed by a rapidly evolving environment is a pivotal characteristic of an adaptive organization. In any organization, in this so-called knowledge age, knowledge turn out to be an invaluable asset. The technological advancements have tremendously support to enhance the learning curve. During the past decades with the advancements of technology hastily resulted in current mobile technologies. Presently, mobile devices and technologies are more and more attached to most people's day to day lives. Uden (2007) highlights that more and more people are getting mobile-literate. People have a tendency to invest in high performing mobile devices which is considered as an important step to improve the quality of life in this dynamic society (Boja & Batagan, 2009a; Ismail, 2018). The use of m-learning through handheld devices, recognized as the next generation of e-learning, has opened up different new avenues for on the job training. Cobcroft (2006) points out the characteristics that distinguish m-learning from e-learning are spontaneity, informality, situationism and product portability, which allows for ease of mobility.

Mobile technology is growing rapidly in the world. With the rapid growth of mobile devices, the trend of mobile learning also rising. M-Learning is the future generation of learning for continuous learning. Knowledge enhancement is vital for the survival in the industries and, professionals in companies have a major impact on the growth of the companies. Mobile learning is the use of mobile and portable technologies for learning such as Personal Digital Assistants (PDA), palmtops and handheld Personal Computers (PC) to smart phones and mobile phones. These devices are friendly, cheap and easy to use and constantly attached in all walks of life and in a variety of different settings (Ismail, 2018; Boja & Batagan, 2009b; Keegan, 2005). Cook, Holley and Haynes (2006) also points out that mobile devices are becoming more sophisticated and prevalent where learning providers are making increasing use of them. This is the latest technology that can be easily adapted to employee routine. The mobile usage, technology facilities and accessibility become more augmented.

M-learning is defined as a distance learning model which can facilitate the educational needs with the use of mobile or portable technologies/devices such as smart phones, tablets, etc., which enables anywhere anytime learning experience (Biggs & Justice, 2011; Korucu & Alkan, 2011a; Traxler, 2018; Wang, Wu, & Wang, 2009). According to Landers (2002), the importance of m-learning in corporate training becomes evident given the fact that over 50 percent of employees spend a substantial amount of time outside the office and most of the time on the move. Thus, it signifies that mobile technology enhance the potential for learning opportunities for geographically dispersed persons and people who find it difficult to go for traditional classroom environments because of their busy schedules, work and families.

According to Hargreaves (2003) knowledge society is a learning society. Employees must seek for knowledge; therefore, it is important to have a knowledge society. Thus, a mobile knowledge society should be built to enhance the skills and knowledge of the employees. Most of the employees use mobile devices for their working purposes, therefore, use of M-learning for their knowledge gaining will definitely benefit to enhance the efficiency and productivity of their work.

Mostly, employees are most of the time on the move. They have to update their knowledge and should facilitate learning environments which provide ongoing learning, which is independent of the time and place. According to their busy schedules they search for

innovative ways to help them on knowledge acquisition and work more efficiently in the competitive environment. In today's competitive environment, work related learning and constructive progressive learning with flexibility acts critical to survive in the corporate world. M-learning offers the users with this flexibility to learn from anytime in any remote location (Milošević, Živković, Manasijević, & Nikolić, 2015; Wang et al., 2009; Boja & Batagan, 2009a). This signifies that m-learning is the future of longstanding continuous learning and the most effective option for employees to facilitate learning. As most of the employees use mobile technologies for their work purposes, adopting mobile technology for learning would definitely benefit for employee career success.

In order to adapt m-learning as the training platform for employees, there should be factors that influence the mobile learner. Hence, it is significant to identify the factors which will benefit to adapt the mobile learner as employees, m-learning solution developers and telecommunication companies. Becoming the m-learning is an emerging technology trend to develop the skills or enhance knowledge many researchers are focusing on identifying various dimensions of m-learning (Mills, Bolliger, & McKim, 2018; Yang & Du, 2018; Abu-Al-Aish & Love, 2013; Liu, Li, & Carlsson, 2010; Rosman, 2008; Ju, Sriprapaipong, & Minh, 2007; Yi, Jackson, Park, & Probst, 2006; Thompson, Higgins, & Howell, 1991). Hence, there may be a positive influence on professionals to mobile learning, thus, identifying critical success factors for performance oriented mobile learning are of greater value.

In Sri Lanka there is high mobile penetration and through 2007 it had the very best penetration within the South Asian region with subscribers of 8 million with 38.2 percent out of total population (Gunawardana & Ekanayaka, 2009). With the eye to mobility, mobile devices are very fashionable among Sri Lankan population and have tremendous growth during the past decades. According to Telecommunication Regulatory Commission (TRC) of Sri Lanka (2019), there was a growth of mobile users from 2010 to 2019 of 17.2 million to 33.4 million. Thus, it indicates that there is a high mobile penetration where mobile learning can be developed as the learning mode. M-learning is a novel learning platform in Sri Lanka albeit there are distance learning platforms available, the utilization of mobile technologies in learning remains within the booming stage (Gunawardana & Ekanayaka, 2009). M-learning was absent in Sri Lankan context until very recently (Gunawardana & Ekanayaka, 2009). Local universities in Sri Lanka had initiated many blended learning facilities enabling more connective and exposed learning environment for college kids. Karunarathna and Thavareesan (2018) conducted a research to gauge the readiness of students to use m-learning of Faculty of Science of Eastern University in Sri Lanka with 150 students within the faculty. Consistent with that, the students were prepared to use mobile phones for learning process. Gunawardana and Ekanayaka (2009) researched the attitude towards m-learning using 210 medical representatives. Fazeena, Ekanayaka and Hewagamage (2016) conducted an analysis in Sri Lankan context on initiation of m-learning opportunity to study English language among School Leavers. Still the contribution of literature on m-learning is lacking, therefore, further research must be conducted based on diverse aspects (Fazeena et al., 2016; Gunawardana & Ekanayaka, 2009; Karunarathna & Thavareesan, 2018).

Factors driving m-learning adoption is a rarely researched context which also was not properly understood by the educational institutions or business communities (Liu, Li, & Carlsson, 2010). The researchers argue that personal innovativeness (PI) (Abu-Al-Aish & Love, 2013; Liu et al., 2010), Performance Expectancy (PE), Social influence (SI), Self-Management of Learning (SMOL) affects mobile learning. But in Sri Lankan context how these factors affect the adaptation of m-learning is essential for adapting m-learning solutions as the learning platform for employee trainings. Therefore, this paper attempts to identify the factors affects for the adaptation of m-learning.

This paper focus on arguments and explanations that are mainly supported by empirical evidences, thus, follows a deductive approach. The first section of this article covers the background, the current situation, the concept, context and the purpose. Literature review was employed as the main research tool which covered in second section in which research papers, journals, white papers, conference papers and industry publications were used to review the concepts and applications pertaining to readiness to adapt mobile learning. The literature review was used for defining the parameters for the questionnaire for data gathering. Then, will continue by presenting the hypotheses and methodology on the third and fourth sections respectively. Then, results related based on the questionnaire will be presented in section five followed by the conclusion of the research in section six. Finally, conclude the paper by providing insights to future research avenues.

Review of Literature

Mobile Learning

Mobile Learning or M-Learning - the new learning environment is defined by different researchers in different ways. Rosman (2008) defines as “using mobile technologies to enhance the learning process” and mobile learning allows on-the-go professionals to connect to training courses anytime and anywhere. Korucu and Alkan (2011) defines as “a point interacted to provide mobile computer technologies and internet-based learning to be every time, everywhere learning experience”. Keegan (2005) defines as mobile learning is with the use of pocket PCs, PDAs and mobile phones, conducting the education and Biggs and Justice (2011) referred as a learning delivery method using mobile technology. Korucu and Alkan (2011) explains as a distance learning model in which with the support of mobile devices conduct the educational needs and can be used to support traditional learning besides distance learning (Chee, Yahaya, Ibrahim, & Hasan, 2017; Wang et al., 2009). It is a lifelong learning activity that can occur in fluctuating communities and allied with ordinary life states in which people continually develop skills and update knowledge (Sharpley, 2000).

Recent years, technology was rapidly changing in which resulted in the transformation of the learning methodologies. For the success of m-learning, the acceptance of mobile learning should have a positive behavior on the users' intention to use mobile technology for their knowledge enhancement. From the literature, previous researchers have discovered the factors affecting peoples' behavioral intention to use mobile learning. But, researches in Sri Lankan context are in short supply (Liyanagunawardena et al., 2013) and with related to employees trainings. In order to make the corporate companies to adapt m-learning as the training platform for employees, it is required to find the factors that have been discovered around the world to suit for this context. Although the researchers have found many factors in the literature review, this study is focused on main factors which were found to be more related to the adaptation of this new technology.

Perceived Ease of Use (PEOU)

Researchers such as Channar, Khoubati, Ujan, Bhutto and Pathan (2019), Yang and Du (2018), Suki and Suki (2011), Fadare, Babatunde, Akomolafe and Lawal (2011), Donaldson (2011), Liu et al. (2010) used TAM as the base model which focuses on the behavioral intention towards mobile learning. The two key factors in determining intention, which predict the development of an innovation and are present in all studies of TAM model development, are perceived usefulness (PU) and perceived ease of use (PEOU) (Channar et al., 2019; Yang & Du, 2018; Davis, 1989).

Perceived ease of use is the degree to which the individual considers that the usage of a particular technology does not entail extra effort; the greater the perceived complication, the lower the degree. This has a positive influence on perceived usefulness (O’Cass & Fenech, 2003; Venkatesh & Davis, 2000).

Perceived Usefulness (PU)

Perceived usefulness is derived from the Innovation Diffusion Theory which has two distinct aspects; near-term usefulness and long-term usefulness (Chau, 1996). It is defined as “the degree to which users believe that usage of the system would boost their learning capabilities” (Davis, 1989). TAM postulates that perceived usefulness has a direct effect on intention to use those systems in the future (Bajaj & Nidumolu, 1998). Thompson, Higgins and Howell (1991) adopted the concept of near-term/long term usefulness to the acceptance of personal computers which construct of job fit. The usage of specific information systems in different sectors is affected by PEOU and PU (Nayanajith & Dissanayake, 2019; Iqbal & Qureshi, 2012; Liu et al., 2010; Lu et al., 2005).

Personal Innovativeness (PI)

Personal innovativeness is the individuals’ willingness to trial any new information technology (Agarwal & Prasad, 1998). According to Mills et al. (2018), now most individuals are keen to try new things and always look for innovative things. When it comes to learning, m-learning tends to be an innovative way for learning, the more personally innovative, the more success of m-learning becomes. As highlighted by Lu et al. (2005), people who are higher in personal innovation compared with those with lower level of innovativeness are more motivated towards new information system innovations. Personal innovativeness is an important interpreter for perceived ease of use (Yi et al., 2006; Lu et al., 2005). It is evident that high level of personal innovativeness is an important factor for intention to use the new technology. More the people are personally innovative more the people tend to use m-learning.

Performance Expectancy (PE)

Performance expectancy is defined as “the degree to which an individual believes that using the system will help him or her to attain gains in job performance”. Venkatesh et al. (2003) pointed out that it is similar to perceived usefulness to some extent. Gunawardana and Ekanayaka (2009) stated that performance expectancy is a collection of factors which can be observed individually or collectively with relation to intention to use. The factors include relative advantage, job-fit, extrinsic motivation, perceived usefulness and outcome expectations.

Social Influence (SI)

Venkatesh et al. (2003) defined as “the degree to which an individual perceives that important others believe he or she should use the new system”. Social influence is a construct of TAM and it is suggested to be a determinant of behavioral intention. Al-Qeisi (2009) states that “individual’s intention to adopt (or continue usage of) the IT is determined by two factors: one reflecting personal interest and one reflecting social influence. The first refers to attitudes or personal evaluation of performing the behavior, which may be formed based on three general classes of information: information concerning past behavior, affective information, and cognitive information”. The second, social influences (subjective norms), refers to the

individual's insight towards social pressures whether to adopt or not or to continue or not using the IT (Agarwaal & Karahanna, 2000). Thus, social influence plays a vital role in adapting m-learning as the learning platform.

Self-Management of Learning (SMOL)

Smith, Murphy and Mahoney (2003) define as “extent to which an individual feels he or she is self-disciplined and can engage in autonomous learning”. It is essential to have the self-management of learning in the context of m-learning. In order to take the maximum benefit from learning through m-learning, self-management or self-direction plays a critical role. Due to its flexibility which allows to learn anywhere anytime require the self-direction towards learning to get the maximum gain from it. Since it is a distance learning method the flexibility leads to the freedom of learning at user's own convenience. If a person lacks the level of self-management, self-direction, it decreases the intention to use m-learning.

Conceptual Framework

Based on the literature given in the above section, researchers identified six factors are directly affected to the behavioral intention of using m learning solutions as the training platform among corporate companies in Sri Lanka. Accordingly, the conceptual framework was developed as the figure 3.1.

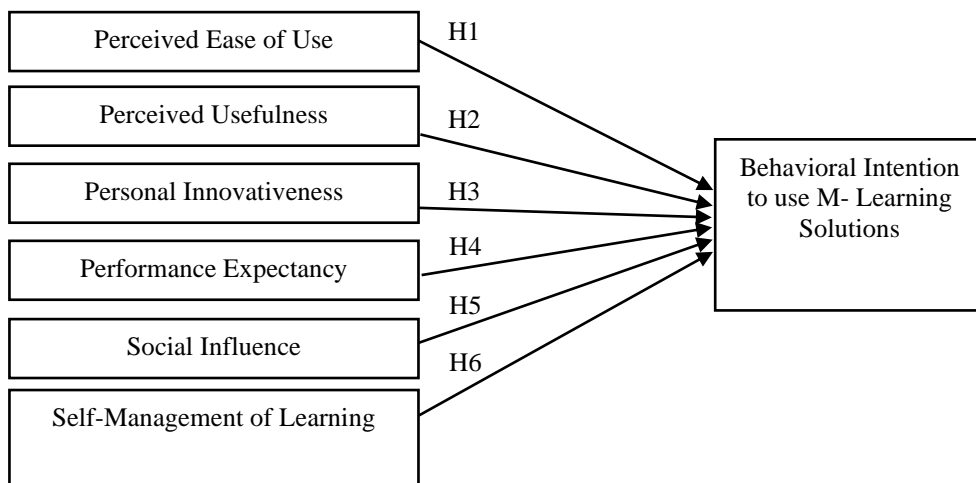


Figure 1 Factors Influence the use of mobile learner

Source: Authors Work

Hypothesis

Based on the literature given in above sections, several hypotheses were developed to demonstrate the relationship between independent variable and dependent variable of the research model of the present study.

The studies conducted by Clark (as cited in Lu, Yao, & Yu, 2005) shows that ease of use to be one of the significant factor that determined general use of wireless handheld devices. If a person think mobile learning is easy to operate will generate a higher intention to adopt mobile learning. Marchewka and Kostiwa (2007) points out that “ease of use may become non-significant over extended and sustained usage. Therefore, perceived ease of use can be expected to be more salient only in the early stages of using a new technology”. Mobile

learning is a new enhancement of the educational process. It is still in the initial stages of the educational process in which the ease of use should have an impact on influencing the user for mobile learning. Hence, perceived ease of use of m-learning will have a positive effect on the users' behavioral intention to adopt m-learning for their knowledge enhancement. The past researches provide the evidence that there is a positive feeling of perceived near-term/long-term usefulness for behavioral intention. Thus, the following hypothesis can be constructed.

H1: Perceived Ease of Use has a positive effect on Intention to Use mobile learning

Perceived usefulness is "the extent to which an individual believes that using a technology can enhance the performance of his or her job" (Dwivedi et al., 2019). Davis (1989) states that Perceived usefulness is considered to be an extrinsic motivation for the user and is defined as the degree to which a person believes that the use of a particular system can enhance the work performance. The studies conducted by Davis (1989) and Thompson et al. (1991) provide the evidence that perceived usefulness of the technology is directly related to the work performance and it enhances the efficiency of work. This will definitely influence the mobile learner as employees always seek to compete with the co-workers, which require work performance drastically. Hence, the use of this novel mobile technology for learning will definitely improve their work performance giving the opportunity to enhance the skills by acquiring knowledge required to compete in the competitive work environment.

The individuals may adopt a learning activity since it facilitates the attainment of important future goals even if they lack interest in the learning activity for its own sake (Eccles & Wigfield, 2002). Improving learning performance, effectiveness and productivity represent students perceived near-term usefulness while getting a job, salary raise, or a job promotion are bases of perceived long-term usefulness (Chiu & Wang, 2008). People usually focus on both long-term and near-term usefulness. If they are likely to think there is perceived long-term and near-term usefulness, it will motivate the learner to use m-learning as their method of learning. The past researches reveal that there is a positive feeling of perceived near-term/long-term usefulness for behavioral intention.

H2: Perceived Usefulness has a positive effect on Intention to Use mobile learning

More the people are personally innovative the more they tend to be risk takers. When using new learning environment, the users should take the risk of accepting the new environment (Lu et al., 2005). "Innovative individuals tend to be more daring, venturesome and risk takers, and they are more likely to accept a new IT innovation despite a high level of uncertainty and risk related to the technology adoption" (Liu, 2011). The past researches predict that there is a relationship between the personal innovativeness and intention to use the new technology. Thus, the following hypothesis is constructed.

H3: Personal Innovativeness has a positive effect on Intention to Use mobile learning

Wang et al. (2009) points out that performance expectancy has a positive influence on the intention to use mobile learning. Performance expectancy (PE) has a significant effect on the intention to use (Channar et al., 2019; Wang et al., 2009; Grant & Danziger, 2007; Park, Yang, & Lehto, 2007) and the studies provide the evidence that there is a positive relationship with intention to use mobile learning. Certain culture specific matters may obstruct students to adopt the high-tech learning atmospheres. This challenge can overcome by establishing performance expectancy via seminars, displays, simulation workshops and precursor programs thereby boost m-learning practices. The past researches predict that PE has a positive relationship with intention to use mobile learning. Thus, the following hypothesis is constructed

H4: Performance Expectancy has a positive effect on Intention to Use mobile learning

Social influence (subjective norms) is one of the reasons individual's intention to adopt which refers to the individual's insight towards social pressures whether to adopt or not or to continue or not using the IT (Al-Qeisi, 2009; Agarwal & Karahanna, 2000). According to Venkatesh and Davis (2000) social influence makes the decision of learners whether to accept new learning environment or not. According to Miller, Ranier and Corley (2003) the decision of learner influences the others such as peers and instructors. Also, Wanninayake and Chovancová (2012), found out that inadequately educated people become more ethnocentric compared to highly educated people. Social influence is a significant influencing factor for mobile learning (Al-Qeisi, 2009; Venkatesh and Davis, 2000; Venkatesh et al., 2003). Thus, it shows that social influence has a greater impact on the intention to use mobile learning.

H5: Social Influence has a positive effect on Intention to Use mobile learning

According to McFarlane, Roche, and Triggs (2007), "the increased learner autonomy and personalization posit a heightened requirement for appropriate self-direction learning capability, such as capabilities of locating and evaluating resources, critical thinking and reflecting on their own learning". M-learning is a distance learning method which self-management or self-direction for learning is essential. The flexibility to learn from anywhere at any time leads to the freedom of learning at user's own convenience. If a person lacks the level of self-management, it decreases the intention to use. Wang et al. (2009) explored that there is a positive relationship between self-management of learning and intention to use m-learning where the results revealed that better autonomous learning skills are more likely to adopt m-learning. Self-direction is essential to have a better learning environment and to gain maximum benefit. Thus, it is assumed that there is a positive relationship between self-management of learning and the intention to use mobile learning and the following hypothesis is constructed.

H6: Self-Management of learning has a positive effect on behavioral intention to use mobile learning.

Methodology

The research was carried out in many stages. Each stage had several activities to perform to retrieve the deliverables. In the pursuit of the research, first a literature review was conducted to identify the related work of the researchers. For this, research papers, journals, white papers, conference papers and other material were used. Then, evaluated the current frameworks, theories, models, strategic plans, etc. and the related future work. The worldwide information was evaluated and the relevance of them to Sri Lankan context was done. Then the literature review was used for defining the parameters for the questionnaire for data gathering. After the literature review, a survey was conducted by choosing a sample of 30 corporate companies in Sri Lanka. For that, a questionnaire was prepared and was distributed among corporate company heads of the selected companies. The questionnaire included close-ended questions and option-based questions for collecting demographic data, such as age group, gender, professional level information of the respondents. Further, participants were asked to evaluate statements of five-point Likert scale. The collected data were evaluated. The relevant statistical methods were chosen depending on the related quantitative and qualitative data. For the analysis the statistical software package SPSS was used. Then from the analyzed data a conceptual framework of adaptation of mobile learning among employees in corporate companies was developed.

Results

Data analysis has been conducted using the statistical software package IBM SPSS Statistics v25. The instruments were validated using convergent validity, which is Cronbach's alpha which is the commonly used measure for testing the extent to which multiple indicators for a latent variable belongs together (Bacon et al, 1995). Thus, Cronbach's alpha was calculated to test the reliability for each defined scale variable. The first part of the questionnaire was the demographic data which was nominal. The next part was covered with Likert scale questions which ranged from 1 (strongly disagree) to 5 (strongly agree). The hypothesis testing for nominal and interval data was accomplished through ANOVA. The correlation analysis was conducted to identify the relationship between independent variables and the dependent variable. The measurement was done using the survey questionnaire, which was distributed among the corporate company heads of the selected companies.

The survey questionnaire consisted of two parts; the first part was the demographic data section. It consisted of age group, gender and designation. The highest age group was 35 to less than 45, which was 49.24% of the sample and next was 25 – less than 35 and 55 and above with 21.97% and 16.67% respectively. The lowest was the 45 – less than 55 group which represent the 16% of the sample. The age group distribution implies that irrespective of the age now the company leaders were keen to use the new technologies, and this will have a great effect on the growth of m-learning. These age group were mature enough to understand and also had the experience in adjusting to new environments. Thus, it will have a positive impact on behavioral intention to use mobile learning.

From the sample population, 85 were males that are 64.4% of the sample and 35.6% were Females (Table 5.1). In Sri Lankan context, males are usually keen to seek new technologies. They try out new things and can easily adapt to them. Males are usually curious on attempting new advanced technologies and it will affect to move into this new mobile learning era. The designations were ranging from CEO to managers who makes the key decisions to adapt the training needs of the employees. Different levels of corporate leadership providing the support is a positive factor to make the m-learning a viable option for the companies. The activeness and the eagerness are more important to engage in mobile learning. Since they can easily provide the leadership to adopt this new learning methodology, it will have a huge effect on adapting m-learning.

Table 5.1 Demographic Profile of the Sample

Age Group		
	Frequency	Percent (%)
25 - less than 35	29	21.97
35 - less than 45	65	49.24
45 - less than 55	16	12.12
55 and above	22	16.67
Total	132	
Gender		
	Frequency	Percent (%)
Female	47	35.6
Male	85	64.4

Total	132	100.0
Designation		
	Frequency	Percent (%)
CEO	8	6.1
PMO	19	14.4
Head of Training and Development	23	17.4
Head of HR	33	25.0
Assistant Head of HR	27	20.5
Product Manager	22	16.7
Total	132	100.0

Source: Survey Data 2020

For the analysis, initially the descriptive statistics and a reliability analysis was conducted in order to measure the internal consistencies of the total scores for each scale through Cronbach's Alpha Coefficients. The calculation of reliability measurements is presented in Table 5.2. The measurements are based on according to George and Mallery (2003) in which Cronbach Alpha > .9 – Excellent, > .8 – Good, > .7 – Acceptable, > .6 – Questionable, > .5 – Poor, and < .5 – Unacceptable.

Table 5.2 Reliability Analysis / Descriptive Statistics

Scales	No of Items	Cronbach's Alpha	Mean	SD
Perceived Ease of Use (PEOU)	5	.885	4.1281	.52756
Perceived Usefulness (PU)	5	.837	4.0982	.51405
Personal Innovativeness (PI)	3	.751	3.9678	.46079
Performance Expectancy (PE)	4	.834	4.0943	.49933
Social Influence (SI)	4	.883	3.8728	.54676
Self-Management of Learning (SMOL)	4	.928	4.1338	.56656

Source: Survey Data 2020

As per the findings, all the reliabilities for the scales are found to be adequate since Cronbach's Alpha values are higher than 0.7. This means the set of variables are reliable where in turn the internal consistency reliability is high. This result suggests that the survey was very reliable. According to the Table 5.2 figures, PEOU, PU, PE, SMOL seems to have a positive interaction with the behavioral intention to use. PEOU, PU, PE, SMOL have a high mean value that is beyond 4. PI and SI seems to have a moderate to high positive interaction in which the mean value is closer to 4. This provides the evidence that there is positive effect on these variables with behavioral intention to use.

Table 5.3 Correlation Matrix

	PEOU	PU	PI	PE	SI	SMOL	BITU
PEOU	1						
PU	.610	1					
PI	.641	.537	1				
PE	.644	.514	.664	1			
SI	.433	.398	.420	.553	1		
SMOL	.395	.435	.483	.571	.461	1	
BITU	.649	.545	.635	.761	.532	.636	1

Source: Survey Data 2020

A Pearson product-moment correlation was run to determine the relationship between the variables. Correlations estimate the strength of the linear relationship between two (and only two) variables. Correlation coefficients range from -1.0 (a perfect negative correlation) to positive 1.0 (a perfect positive correlation). The closer correlation coefficients get to -1.0 or 1.0, the stronger the correlation. The closer a correlation coefficient gets to zero, the weaker the correlation is between the two variables. The correlation coefficient value between the dependent variable BITU and independent variables PEOU, PU, PI, PE, SI, SMOL had a strong positive correlation. In addition, correlation coefficient value of PEOU between SI and SMOL, PU between SI and SMOL, PI between SI and SMOL, SI between SMOL had a moderate degree of positive correlation which was statistically significant ($p=.000$) and all other variables had a strong, positive correlation, which was statistically significant. Thus, the findings indicate that all the variables have a significant positive correlation with behavioral intention to use mobile learning and also each aspect have a positive correlation among themselves.

Table 5.4 Regression Model Fit Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.829 ^a	.688	.670	.29983

a. Predictors: (Constant), SMOL, PEOU, SI, PU, PI, PE

Source: Survey Data 2020

R represents the multiple correlation coefficient, which can be considered to be one measure of the quality of the prediction of the dependent variable. According the Table 5.4, the value of .829, indicates a good level of prediction. R^2 value (also called the coefficient of determination) is the proportion of variance in the dependent variable that can be explained by the independent variables. According the Table 5.4, the value of .688 is that independent variables explain 68.8 % of the variability of the dependent variable, intention to use m-learning. And 31.2% (100% - 68.8%) of the variation is caused by factors other than the predictors included in this model.

Table 5.5 ANOVA - Statistical significance of the model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.185	6	3.531	39.278	.000 ^b
	Residual	9.619	107	.090		
	Total	30.804	113			

a. Dependent Variable: BITU
b. Predictors: (Constant), SMOL, PEOU, SI, PU, PI, PE

Source: Survey Data 2020

The F-ratio in the ANOVA (Table 5.5) tests whether the overall regression model is a good fit for the data. The table shows that the independent variables statistically significantly predict the dependent variable, $F(6, 107) = 39.278$, $p(.000) < .05$ that is, the regression model is a good fit of the data.

Table 5.6 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.069	.289		-.237	.813
	PEOU	.192	.081	.194	2.373	.019
	PU	.055	.073	.054	.749	.456
	PI	.097	.090	.086	1.076	.284
	PE	.386	.091	.369	4.237	.000
	SI	.068	.064	.071	1.059	.292
	SMOL	.231	.064	.251	3.627	.000
a. Dependent Variable: BITU						

Source: Survey Data 2020

Statistical significance of each of the independent variable tests whether the unstandardized (or standardized) coefficients are equal to 0 (zero) in the population. If $p < .05$, the coefficients are statistically significantly different to 0 (zero). The usefulness of these tests of significance are to investigate if each explanatory variable needs to be in the model, given that the others are already there. Given that, the t-value and corresponding p-value are in the "t" and "Sig." columns (Table 5.6), respectively, in this the tests implies that PEOU $p(.019) < 0.05$, PE $p(.000) < 0.05$, SMOL $p(.000) < 0.05$ are significant, but PU $p(.456) > 0.05$, PI $p(.284) > 0.05$, SI $p(.292) > 0.05$ are no more useful in this model when the other three variables are already in the model. That is, with PEOU, PE, SMOL in the model, PU, PI, SI no more adds a substantial contribution to intention to use m-learning. The highest contributing predictor is PE (.369) and, then next is SMOL (.251) and the next is PEOU (.194) to explain intention to use. PEOU, PE and SMOL are the factors affecting intention to use mobile learning among corporate companies in Sri Lanka.

Conclusion

This research is based on concerning several factors related to technology acceptance model, Unified Theory of Acceptance and Use of Technology and based on the literature of m-learning. The survey provided the evidence that there is a positive attitude towards mobile learning among corporate companies. This is a positive side for the educational institutions, organizations and software development companies. For the busy people and people who cannot travel from far can easily move into this mobile learning method and enhance their knowledge. Hence, they have the ability to acquire knowledge and also add up qualifications to their profile.

The Perceived Ease of Use (PEOU), Performance Expectancy (PE) and Self-Management of Learning (SMOL) have a great effect on improving the usage of mobile learning. The educational institutions and software development companies should focus on these factors before adopting the learning method and developing educational frameworks. Mobile learning Adaptation factors should be linked with the designing of mobile applications. So, the mobile application design and development critical success factors should be further studied.

Additionally, the relationship between the application development and the behavioral intention to use can be further avenues. Moreover, behavioral intention to use and the actual usage of mobile learning can be further researched. The relationship between mobile learning and the industry field can also be studied. The mobile learning with different professions and with different industries can be linked and further research be done. For some fields mobile learning can be more suitable and it will be benefited in the long run. Thus, research on those areas will benefit the growth of the mobile learning.

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