Relationship between Stock Market Performance & Economic Growth: Empirical Evidence from Sri Lanka

N.K.L.Silva¹
Lecturer (Temporary)
Department of Accountancy, Faculty of Commerce & Management Studies,
University of Kelaniya, Sri Lanka.
T.P:071 7093451
silvank_2013@kln.ac.lk

P.R.M.R.Perera²
Lecturer (Temporary)
Department of Accountancy, Faculty of Commerce & Management Studies,
University of Kelaniya, Sri Lanka.
T.P: 071 9182838
malinthar_2013@kln.ac.lk

N.L.C.Silva³
Lecturer (Temporary)
Department of Accountancy, Faculty of Commerce & Management Studies,
University of Kelaniya, Sri Lanka.
T.P:071 6202765
silvanl_2013@kln.ac.lk
**Relationship between Stock Market Performance & Economic Growth: Empirical Evidence from Sri Lanka**

N.K.L.Silva\(^1\), P.R.M.R.Perera\(^2\), N.L.C.Silva\(^3\)

Department of Accountancy, Faculty of Commerce & Management Studies, University of Kelaniya, Sri Lanka.

**Abstract**

In general, economic growth is an important factor which helps a country to become strong and prosper than the other nations in the world. Thus the attempt of this study is to identify the relationship between stock market performance and economic growth of Sri Lanka and to analyze how stock market performance affect to the economic growth of Sri Lanka. Quarterly data is collected from Central Bank of Sri Lanka, Department of Census and Statistics of Sri Lanka, and Colombo Stock Exchange for a period of sixteen years from year 2000 to 2015 to follow the analysis where All Share Price Index representing the Stock Market Performance is the independent variable while Real Gross Domestic Product representing the Economic Growth is the dependent variable. Data set is proven to be normally distributed. Econometric technique of simple regression model and correlation analysis was used to analyze the data using SPSS software in order to identify and further explain the relationship between stock market performance and economic growth of Sri Lanka. Findings of the study is parallel with the previous literature that discloses a strong positive relationship between stock market performance and economic growth of Sri Lanka. This study lengthens the literature, providing valued information to economists in developing countries and to the academia.

**Key Words:** All Share Price Index, Economic Growth, Stock Market Performance, Real Gross Domestic Product, Central Bank of Sri Lanka
Introduction

Stock market plays an important role in the growth of commerce and industry sector which ultimately affects to a country’s economic growth in a large extent which leads the business sector, government and the central bank to keep a close supervision on the activities of the stock market. Further stock market performance has been the subject of intensive theoretical and empirical studies (Demirguc-Kunt, A., & Levine, R., 1996).

More recently, the emphasis has increasingly shifted to stock market indexes and the effect of stock markets on economic development. Stock market contributes to the mobilization of domestic savings by enhancing the set of financial instruments available to savers to diversify their portfolios providing an important source of investment capital at relatively low cost. A well-functioning and liquid stock market, that allows investors to diversify away unsystematic risk, will increase the marginal productivity of capital (Pagano, M., 1993). Another important aspect through which stock market performance may influence economic growth is risk diversification. Obstfeld, M., (1994) suggests that international risk sharing through internationally integrated stock markets improves the allocation of resources and accelerates the process of economic growth.

Performance of the stock market affect to the operations of commercial banks and thus, on economic growth. So that the stock market is becoming more vital, in a way which we can’t ignore its role. A well-established stock market not only can mobilize capital and diversify risks between market agents but also it is able to provide different types of financial services than banking sector to stimulate economic growth (Antonios, A., 2010).
Stock market performance is an influential factor for economic growth in Sri Lanka. (Athapathu, A. R. & Jayasinghe, P., 2010). Thus the main intention of this study is to explore the causal relationship between stock market performance and economic growth of Sri Lanka as stock market performance favor economic growth (Antonios, A., 2010). Sri Lanka being a developing country in the world, this study would be useful in many aspects of decision making and understanding of the economic growth through stock market performance.

**Literature Review**

Antonios, A., (2010) has carried out a Granger causality tests which indicates that there is a unidirectional causality between stock market performance and economic growth with direction from stock market performance to economic growth. Levine, R., & Zervos, S., (1998) found that even after controlling for many factors associated with growth, stock market liquidity is both positively and robustly correlated with contemporaneous and future rates of economic growth, capital accumulation, and productivity growth. Further they have found that stock market liquidity predict long-run growth, capital accumulation, and productivity improvements.

According to Levine, (1991); Holmstrom, B., and Tirole, J., (1993); Bencivenga et al., (1995) the initial level of stock market liquidity has a statistically significant relationship with future values of Output Growth, Capital Stock Growth, and Productivity Growth even after controlling for many other factors associated with long-run economic performance. These results are consistent with the view that stock market liquidity facilitates long-run growth. An empirical test on the relationship between stock market and economic growth based on co integration analysis adopting Johansen’s methodology, proved that the stock market

Tachiwou, A. M., (2010) found that stock market performance positively affect to the economic growth in West African monetary union both in the short run and long run using simple two step procedure of Engle and Granger when it comes to the econometric methodology. Demirguc-Kunt, A., & Levine, R.,(1996) found that better functioning, more internationally integrated stock markets boost economic growth by shifting society’s savings into higher return investments, all else being equal.

Khan, M. S., & Seenhadji, A. S., (2000) have found that there is strong positive and statistically significant relationship between financial depth and growth in the cross section analysis.

Many researchers have used following linear regression model in finding relationships between two variables (Alam & Uddin, 2009). Same model is used in this study to explicate the causality between Stock Market Performance and Economic Growth of Sri Lanka.

\[ Y_{it} = u_{0i} + u_{1i} X_{it} + u_{it} \]

**Methodology**

**Data Collection and Sample**

According to literature, the study is based on quantitative approach & secondary data is collected from Central Bank of Sri Lanka, Colombo Stock Exchange and Department of Census and Statistics for a period of 16 years from year 2000 to 2015 on quarterly basis with 64 observations where All Share Price Index
representing the Stock Market Performance is the independent variable while Real Gross Domestic Product representing the Economic Growth is the dependent variable. Shapiro-Wilk test proves the data set is normally distributed and data contains no outliers.

Economic growth is the increase in the market value of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP. Therefore assuming that there is a, in this study, simple linear regression & correlation analysis is conducted using SPSS software in order to identify the stated relationship.

**Hypotheses**

Many of previous studies have found that stock market performance has a positive impact on the economic growth (Antonios, A., 2010). Based on previous findings in literature, researcher was encouraged to build following hypotheses.

H₁. There is a relationship between stock market performance and economic growth of Sri Lanka (Tachiwou, A. M., 2010)

H₀. There is no relationship between stock market performance and Economic Growth of Sri Lanka performance and economic growth of Sri Lanka

**Model Specifications**

Following linear regression model is used by many researchers in finding relationships between two variables (Alam & Uddin, 2009). Same model is used in this study to explicate the causality between Stock Market Performance and Economic Growth of Sri Lanka.
\[ Y_{it} = u_{0i} + u_{ii} X_{it} + u_{it} \]  \hspace{1cm} (1)

Where,

\( Y_{it} \) is Economic Growth of Sri Lanka (Real Gross Domestic Product of Sri Lanka)

\( X_{it} \) is Stock Market Performance (All Share Price Index of Sri Lanka)

**Analysis & Interpretation**

In this study, simple linear regression and correlation analysis is applied to identify the relationship between all share price index representing stock market performance and real gross domestic product representing economic growth of Sri Lanka. Therefore according to Pearson Correlation, there is a +.905 of strong positive correlation between stock market performance & economic growth in Sri Lanka.

<table>
<thead>
<tr>
<th></th>
<th>Economic Growth</th>
<th>ASPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Growth</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>64</td>
</tr>
<tr>
<td>ASPI</td>
<td>Pearson Correlation</td>
<td>.905**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>64</td>
</tr>
</tbody>
</table>

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

R Square- \( R^2 \) or coefficient of determination, determines, how much the dependent variable is explained by the independent variables. In this study, it indicates that 81.9% of economic growth is determined by the stock market performance where the rest of the 18.1% is determined by the other factors of economic growth. It state that the model is good, as it determines 81.9% of the economic growth.
Probability values of T-Statistics shows the degree of significance level by independent variables on dependent variable. Accordingly the probability value of t-statistics of the stock market performance is 0.000 at 95% confidence level means that the explanatory power of the stock market performance regarding the economic growth is high.

Further p-value of F-Statistics of 0.000, provide similar results as the p-value of F-Statistics is also significant.

Coefficient represents the proportionate relationship between independent variables and the dependent variable. In this study, the coefficient of the stock
market performance is 271.805 which means when the all share price index representing the stock market performance increases by one unit, the economic growth will be increased by 271.805, stating that there is a strong relationship between the stock market performance and the economic growth in Sri Lanka.

With reference to the results, a simple regression model can be developed as follows.

Economic Growth = \(20173.656 + 271.805 \times \text{ASPI} + U\)

<table>
<thead>
<tr>
<th>Coefficients*</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>20173.656</td>
<td>66457.030</td>
</tr>
<tr>
<td>ASPI</td>
<td>271.805</td>
<td>16.207</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Economic Growth

**Conclusion**

This study examined the relationship between all share price index representing the stock market performance and real gross domestic product representing the economic growth for Sri Lanka using quarterly data for a period of 16 years from year 2000-2015. Given that parallel outcomes to the previous studies, the analysis prove that the all share price index representing the stock market performance has a high significance over the economic growth of Sri Lanka. Accordingly the correlation between stock market performance and economic growth is Strong positive. Coefficient of determination of 81.9% declare that the total of 81.9% of
the economic growth is determined by the stock market performance where it mentions the decisive power of economic growth through the selected independent variable, stock market performance is high.

The findings of this study is in line with the discussed literature which explained a positive relationship between all share price index representing the stock market performance and the economic growth of Sri Lanka. Further this study is subject to limitations, as this study considered only one variable to test the impact on economic growth as there are other omitted variables which has an explanatory power of 18.1% on economic growth.

Further there could be uncaptured variations in data due to unusual events. In future research, it is expected to analyze the other omitted important factors which are not considered in the simple regression model in determining the economic growth of Sri Lanka in order to analyze the collective impact of all the factors affecting economic growth with the aim of elevating the research findings of this study.
References


