

Stock Market Performance as an Antecedence of Economic Growth in Sri Lanka

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Abstract

The linkage between stock market operations and the economic growth has been tested by most of the economists in various countries. Most of them have come up with the conclusion of there is an impact on stock market performance on economic growth. The main purpose of this study was to explore the causal link between stock market performance and economic growth in terms of a simple theoretical and empirical literature framework. The study has used all share price index (ASPI), market capitalization and market turnover, which is a composite representation for whole stock market operations as independent variables. The gross domestic product has been employed to represent the economic growth in the country as the control variable. This research tested the association between stock market operations and the economic growth in Sri Lankan context employing multiple regression models using fifteen years data from 2000 to 2014.

The empirical findings of the study confirm the positive relationship between economic growth and the stock market operations in Sri Lankan context with 92.5 per cent R squared and 92.3 per cent adjusted R squared. This result confirms that 92.3 percent of the variation of the gross domestic product will be explained through selected independent variables. This study will be helpful to future researchers and the potential stock market investors. The findings suggest a positive relationship between efficient stock market and economic growth, both in the short run and long run and there is evidence of an indirect transmission mechanism through the effect of stock market development on investment and they are seen as providing a service that boosts economic growth.

Keywords: *Stock market, economic growth, all share price index, market capitalization, market turnover, gross domestic product*

Background of the Study

The universal understanding is that an appropriate financial system results in a better financial performance and contributes to the economic growth. This is because it links household savings and corporate sector investment, which facilitates smooth consumption for the individual. It seems to be the Stock market is a good indicator of the economy of a country. According to the statistics data of the central bank report, it clearly indicated by the correlation between economic growth and the stock market operations.

The stock market is widely recognized as a means for domestic resource mobilization, facilitating the supply of long term financing for investments with growth potential. In a long term perspective, stock markets are expected to play several key roles. First, spreading the risks of long-term investment projects is one of the crucial functions of the stock market. The growth of stock markets can lead to a lower cost of equity capital and thereby help investments to take place and accelerate growth. Second, by imposing a degree of control over the investment behavior of companies through continuous monitoring of their share prices can contribute to more efficient investment. Thirdly, by attracting foreign portfolio flows, the expansion of the stock market can serve to enhance the supply of investing able funds.

Focusing on Sri Lanka, Hemachandra (2005) concluded that banking sector financial deepening has had positive implications of the growth of the Sri Lankan economy. Traditionally the emphasis had been on bank funds for economic development. More recently, the emphasis has increasingly shifted to the capital market instruments and the effect of stock markets on economic development. It is thought that a well-developed stock market

should help increase savings and efficiently allocate capital to productive investments, which leads to an increase in the rate of economic growth. Stock markets contribute to the mobilization of domestic savings by enhancing the set of financial instruments available to savers to diversify their portfolios.

Sri Lanka has seen a significant development in the financial market activity in the post 1978 era after the liberalization of the economy. The establishment of the Colombo Stock Exchange (CSE) in 1985 and the Securities Exchange Council (SEC) in 1987 has helped the capital market especially the stock market development in the country. According to Atapattu and Jayasinghe (2009) the stock market development is an influencing factor for economic growth in Sri Lanka.

Throughout the world, the type of financial model practiced by sovereign countries reflects the type of government as a regime in power. Many, Eastern European, Middle Eastern and African countries, including Libya, have practiced socialism for a long time. However, in the light of recent trends, and under the direction of the IMF and World Banks, many countries are now reforming their economies and gradually adopting capitalism, largely as a result of the failure of socialism and particularly in order to rescue their economies. In this context, the World Bank (1994, 1989) has argued for the establishment and promotion of stock markets in developing countries in line with those existing in developing countries.

Many of the researchers engaged to examine whether there is a relationship between stock market operations and economic growth in various countries. Several others have done studies elsewhere to see the stock market impact on economic growth. Many studies have proved positive relationships between stock market performance and economic growth. The situations in the developed markets have been easy to test, the markets being adequately large to make an impact on the economies.

Stock markets are one of the important parts of the financial system, which enable firms to raise capital by issuing their shares and also create an environment in which the shares are traded (Bayar et al., 2014). However, theoretical literature offers conflicting predictions about the role of stock markets in promoting economic growth (Carporeale et al., 2004). Earlier research emphasized the role of the banking sector in economic growth. In the past decade, the world stock markets surged, and emerging markets accounted for a large amount of the boom. Relevant research has therefore begun to focus on the linkages between the stock markets and economic growth. New theoretical work shows how stock market development might boost long-run economic growth, and new empirical evidence supports this view (Garcia & Liu, 1999).

The recent global financial crisis, which was precipitated by the United States mortgage crisis, liberalization of global financial regulations, boom and burst in the housing market and its effect on other weaker countries like Nigeria necessitates the need for an empirical study of this nature. Evidence in Nigeria shows that between 2008 and 2009, the stock market collapsed by 70 per cent point (Sanusi, 2010). This coincided with the period of global financial crisis, which began in the middle of 2007 in the United States and spread into Nigeria in 2008 (David-Wayas, 2014). Thus, the aim of the study is to investigate the causal relationship between stock market performance and economic growth. This is in line with the argument that for the stock market to flourish there has to be favorable economic conditions. On the other hand, to achieve economic growth, the stock market has to be efficient and robust. Thus, the study departs from previous studies conducted on the Nigerian economy in two respects. First, it adopted all the relevant variables. This is based on economic and finance theories. Second, stability of the stock market performance was examined. These research questions were examined by employing pair wise Granger causality and AR root graph.

However, the theoretical literature on the contrary offers conflicting predictions about the role of stock markets in promoting economic growth. Various researchers and policy makers alike have focused a lot of attention trying to understand the various ways in which economic growth can be enhanced. The relevance of policy implications cannot be overlooked due to the fact that, supposing the financial market development and with particular regard to the stock market can be an engine for growth; then the policy makers should focus their attention and energies towards establishing and sustaining a dynamic stock market in order to foster a sound and continued economic growth.

In an effort, therefore to better understand the relationship between stock market development and economic growth, more and more case studies might better identify the causal linkage between stock market trends and economic growth. However the situation in Sri Lanka may be different, the relatively smaller size of the stock market may only have a limited impact on the country's economic activity. Therefore, in this study consider the effect of the Sri Lankan stock market performance in the economic development. The fundamental issue of this study is "Is there any significant impact on stock market performance on economic growth in Sri Lankan context?"

This study provides full guideline for potential investors make their investment in a profitable manner and that will positively contribute to the economy. The objective of this study is to evaluate the impact of stock market performance on economic Growth in Sri Lanka.

Methodology

Gross domestic product (GDP) can be defined as an aggregate measure of production equal to the sum of the gross values added of all resident institutional units engaged in production (plus any taxes, and minus any subsidies, on products not included in the value of their outputs. In this study, Gross Domestic Product is described as the dependent variable since it is commonly used to measure the economic performance of a country or a region. Because it is a measure of value added rather than sales. Gross Domestic Product is important due to it gives an indication about the production of the country and The GDP components tell what parts of the economy are contributing the most. Real Gross Domestic Product can also be used to compare the size of economies throughout the country. However to arrive at a better result, the researcher has used the Gross Domestic Product as the dependent variable.

The CSE has two main price indices (ASPI & SP & SL 20), 20 sector price indices and total return indices which are based on ASPI, SP & SL 20 and sector indices. The index values are calculated on an on-going basis during the trading session, with the closing values published at the end of each session.

The all share price index is one of the principal stock indices of the Colombo stock exchange in Sri Lanka. ASPI measures the movement of share prices of all listed companies. It is based on market capitalization. Weighting of shares is conducted in proportion to the issued ordinary capital of the listed companies, valued at current market price (i.e. Market capitalization). The base year is 1985, and the base value of the index is 100. This weighting system allows the price movements of larger companies to have a greater impact on the index. Such a weighting system was adopted on the assumption that the general economic situation has a greater influence on larger companies than on smaller ones. Share price is one of major important measurement of the stock market operation. The ASPI indicates the price fluctuations of all the listed companies and covers all the traded companies during a market day. The researcher used past 15 years data (2000 - 2015) as the sample. The rationale behind using the sample is arriving a result based on the very recent figures and the purpose of using 15 year data is obtaining a better result.

Data Presentation and Analysis

Table 1: Descriptive Statics of Study Variables

		GDP	ASPI	MCAP	TUOV
N	Valid	180	180	180	180
	Missing	0	0	0	0
Mean		1.0215	1.0168	1.2123	1.0149
Median		1.0200	1.0100	1.0200	1.0100
Mode		1.04	1.03	.87	1.01
Std. Deviation		.07563	.07304	.79768	.05431
Skewness		.602	.542	2.325	-.567
Minimum		.84	.84	.12	.79
Maximum		1.27	1.25	5.12	1.21

Source: SPSS Output

From the table 1 in which descriptive values of all the variables have been calculated based on the 180 observations. Those indicate that the dependent variable that, the market index, ranges between 0.84 and 1.27 with a mean value 1.0215 and standard deviation 0.075. This show 51% volatility in Gross Domestic Product, which is represented by the difference between maximum and minimum value at the same time it has 0.075 dispersion from the mean value. Similarly, descriptive statistics in independent variables indicate that all share price index has range 0.84 and 1.25 with mean value and standard deviation as 1.016 and 0.073, respectively. At the same time market capitalization has range 0.12 as minimum and 5.12 as maximum with mean value 1.212 and standard deviation 0.797 and range of turnover between 0.79 as minimum as well 1.21 as maximum its mean and standard deviation are 1.014 and 0.054 respectively. Among this independent variable market capitalization show high volatility than other variables with high standard deviation of 0.798 its mean that data is dispersed from mine by 0.798 other variables are all share price index and turnover show low volatility respectively as well dispersion 0.073 and 0.053.

This research has been carried out correlation analysis to identify the multi-Co linearity. According to the theory, if the relationship between two independent variables is greater than 0.8 it reflect the multicollinearity. As per the model created by the researcher, there is no any multi-co linearity between independent variables which represent as a good model. This further explains that there is no any interdependency among the independent variables selected for this study.

Table 2 Pearson Coefficient Of Correlation Matrix

		Correlations			
		GDP	MCAP	ASPI	TUOV
GDP	Pearson Correlation	1			
MCAP	Pearson Correlation	.473**	1		
ASPI	Pearson Correlation	.961**	.469**	1	
TUOV	Pearson Correlation	-.014	.116	-.016	1

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

Source: SPSS Output

This study has carried out a correlation analysis to identify the multi-Co linearity. According to the theory, if the relationship between two independent variables is greater than 0.8 it reflect the multicollinearity. As per the model created by the researcher, there is no any multi-co linearity between independent variables which represent as a good model. This further explains that there is no any interdependency among the independent variables selected for this study.

An examination of the model summary in conjunction with the Regression table, according to the results reveal that, Durbin Watson test carried out to check the auto correlation among the independent variable, which indicates no auto correlation. Because statistically if Durbin Watson value is equal or near to 2 it reflects no auto correlation, and as per the model summary the Durbin Watson value is 1.996.

According to the R square value, it indicated that the variance of gross domestic product explained through the selected independent variables. Since this is multiple regressions, adjusted R square has used to identify the explanatory power and there is a 92.3% explanatory power of independent variables on the dependent variable. Further, it indicates that the remaining 7.7% variation of the gross domestic product explained by other variables which are not captured by the study. The model created by the researcher is significant at the 1% level of significance with 99% confidence.

When analyzing the coefficients collectively, it can be seen that there is a strong positive correlation between gross domestic product and the all share price index, which has significant at the level of 1% with 99% confidence. The coefficient analyzes of market capitalization there is a positive relationship between gross domestic product and market capitalization. However, when considering turnover it indicates a negative relationship between gross domestic product and turnover varies. Which means, when Turnover is increased the dependent variable will be decreased. Such as, this variable is not statistically significant in the model. That is because due to not having a strong ability to explain the behavior of gross domestic product.

Table 3 : Coefficients Analysis.

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.082	.037		2.181	.031
1 MCAP	.003	.002	.028	1.193	.234
ASPI	.917	.023	.948	40.243	.000
TUOV	-.004	.028	-.003	-.142	.888
R	0.962				
R square	0.925				
Adjusted R Square	0.923				
F	716.671				.000
N= 180		Durbin-Watson = 1.996			

a. Dependent Variable: GDP
Source: SPSS Output

According to the coefficient associated with the model created by the researcher the final output of the research can be established and it has indicated through the regression equation as follows.

$$Q (\text{GDP}) = 0.082 + 0.917 (\text{ASPI}) + 0.003 (\text{MC}) - 0.004 (\text{ML}) + e$$

According to the regression equation arrived by the model, when other factors are zero, then gross domestic product is 0.082. When All Share Price increases by 1% the real gross domestic product is increased by 91%, which reflect the strong positive correlation between gross domestic product and the all share price index. And when it comes to market capitalization in the stock market, it shows the positive relationship of 0.3% between gross domestic product. It means if the market capitalization in the market increased by 1%, the gross domestic product is increased by 0.3%. However, turnover indicated the negative relationship with the dependent variable of gross domestic product. Its means, according to the coefficient associated with the turnover, if that amount increases by 1% the real gross domestic product is decreased by 0.4%. However this is not being the correct indication on the relationship between gross domestic product and the turnover in the stock market.

Conclusion and Recommendation

This study mainly involves testing the impact of stock market performance on growth in Sri Lanka economy. As a result of a detailed quantitative analysis (tabular, graphical and statistical), a quantitative model was developed which measure the impact by using various methodologies. The proposed methodology use All share price index, market capitalization and turnover as the independent variables in explaining economic growth in Sri Lanka. All of the variables have an interpretable relationship and the results of statistical analysis demonstrate that the stock market is the one of most important place and variable which promote economic growth in our country.

As per the observations by the researcher there is a positive relationship between economic growth and the stock market operations. Further founded that then there is a strong positive relationship between the All Share Price Index and the gross domestic product while having a

negative relationship between turnover of the stock market and the gross domestic Product. It means that the turnover of the stock market will not give direct significant impact of the economic growth. Further, there is a positive relationship between the market capitalization and the gross domestic product. Based on the observations made by the researcher stock market operations really affect to the economic growth in Sri Lanka in a significant way.

Given the present political dispensation, all the tiers of government should be encouraged to fund their realistic developmental programmers through the stock market. This will serve as a freedom to release the resources that may be used in other areas of the economy. In this study it has been proven then there is a strong positive relationship between stock market operations and economic growth. So the government should take necessary actions to increase the stock market operations smoothly to achieve higher economic growth. Stock market operations are seen as a cheaper fund sourcing method when compared to other money market operations. So the investors should be encouraged to invest in the stock market and need to be very careful about the cost of transactions and the illegal brokers who earn black money through stock market operations. Further, this study shows clearly that stock market turnover does not show the real indication about the stock market operations and because of that it can be further studied that way of tackling the real operations and how it affect on the economic growth since it is a good indication of the stock market operations.

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