

## Export, Import and Economic Growth: Evidence from Sri Lanka

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### Abstract

This research focuses on the research question as what extent the export and import influence on Economic growth in the Sri Lankan Perspective. Data on the economic growth, export and import from the year 1970 to 2010 were collected for the study purpose. The results revealed that, the export and import have the significant positive relationship with each other, and also, both export and import have the significant impact on the economic growth. Further, the export and import have been associated by 98 percent, which denotes that, there is a strong positive association between export and import. We have suggested that, the small medium enterprises should be motivated towards export orientation. Meantime, the restrictions in the import of the raw materials to the industries should be implemented in the flexible way through the fiscal and monetary policy. In the further research, the performance of the external sector should be tested in the srilankan context to identify the cues in the export and import sector development and its policy framework.

**Key Words:** Export, Import and Economic Growth

### Introduction

The Sri Lankan economy has achieved the 5 percentage growth level approximately for recent four decades. Due to that, we should have responsibility to answer the question like whether these achievements are in the effective or not? When we answer this type question in the economical perspective. We should focus on the other macro economic variables as money supply, unemployment rate, exchange rate, price stability etc. Even though, 5 percentage growth levels is the satisfactory one in the South Asian Region ( Velnampy and Achchuthan, 2013). Further, in the Asian region, china and India have already achieved the 8 percentage growth level. And also output gap between advanced and emerging economies has been narrowing over the past decade and is expected to narrow even further going forward ( Sri Lankan Economic Outlook, 2012). In this context, Export growth is recognized as the main determinant of the production and employment growth of an economy. Research scholars argued the relationship between export, import and economic growth differently and interestingly. Firstly, growth in the export level generally leads to the economic growth through the foreign trade multiplier effort. Second, the foreign exchange made available by export growth allows the importation of capital goods which, in turn, increase the production potential of an economy. Third, the volume of the competition in exports markets cause economies of scale and an acceleration of technical progress in production (Francisco, 2000). Further, the competitiveness in global market leads to production of innovative product and making able the local producers in meeting competition in global market. The contribution of various countries in the global trade state highly significant relation between two variables, expansion in exports and growth in economic activity. Many studies confirm that there is a powerful relation between said variables as export and economic growth ( Usman, Ashfaq and Mushtaq, 2012).

In the export earnings of the Sri Lanka, industrial goods have the great share comparing with agricultural outputs. In the industrial goods, textile sector is viewed as the potential one. Meantime, in the agricultural sector, tea is recognized as the potential one (Economic and social statistics of Sri Lanka, 2012). Sri Lanka's export performance since 2000 has not been satisfactory one. Expanding trade deficit in 2011 and 2012 is partly explained by the unimpressive performance of the export sector. Further, global economic downturn is not the only reason for the low export growth in Sri Lanka ( Kelegama, 2013).

In the Sri Lankan context, Sri Lankan government introduced the 2013 as the development oriented fiscal year, in which, the small medium enterprises are nourished through the incentives and tax holidays. In this context, in the 2013 Budget, some tax incentives and holidays have been included, Such as (1) Profits and income from both export and local sales by manufacturers of garment and ceramic products are taxed at 12%, (2) Manufacturing, distribution and marketing of organic fertilizer and pesticides are exempted from all direct and indirect taxes. And SMEs with annual liable turnover/supplies below Rs.12Mn are liable to pay NBT, (3) Any supply of goods manufactured in Sri Lanka or provision of services, to foreign ships for payments in foreign currency are

treated as deemed exports and the profit and income there from are taxed subject to the concessionary rate of 12%, (4) The sale of goods manufactured in Sri Lanka by an export oriented BOI registered enterprise, any BOI registered enterprise enjoying tax holiday and which is permitted to import project related goods or raw materials on duty free basis under the provisions of that BOI agreement, during the project implementation periods (Nexia International, Budget Highlights, 2013). Based on the above arguments, researchers should check the influence of the export and import on the economic growth in the Sri Lankan context. The Sri Lankan government has taken the strategic policies to rise up the economic growth through the export oriented business development in the Sri Lanka especially in the year of 2013. Therefore this study is viewed as the fruitful one in the developing or emerging countries context to take the cues about the influence of the export and import on the economic growth.

### **Research question**

Following research question is formulated in this study:

What extent the export and import influence on Economic growth in the Sri Lankan Perspective?

### **Objectives**

The main objective of the study is to find out the impact of export and import on economic growth

Secondary objectives are:

- To find out the trend in export, import and Economic growth
- To find out the relationship between export, import and economic growth
- To suggest the Policy makers in the external sector to formulate the economic policy in the developing countries perspective to enhance the economic growth.

### **Review of Literature and Hypothesis development**

There is a wide body of literature analyzing the theoretical links between exports and economic growth. According to this literature, the relationship between exports and economic growth is determined by different factors. There are four thoughts in the export and economic growth (Dritsakis, 2005). **The first** is the neoclassical export-led growth hypothesis. This theory suggests that the direction of causation is running from exports to economic growth for the following reasons: Export expansion will increase productivity by offering greater economies of scale; Export expansion brings about higher-quality products because of the exporter's exposure to international consumption patterns; Exports will lead a firm to overinvest in a new technology as a strategy for a pre commitment to a larger scale of output, increasing the rate of capital formation and technological change; An export-oriented approach in a labor-surplus economy permits the rapid expansion of employment and real wages; Exports contribute to a relaxation of foreign exchange (Ghirmay, Grabowski and Sharma, 2001; Dritsakis, 2005). **The second view** is that causality runs from economic growth to exports. Higher productivity leads to a lower unit cost, which facilitates exports growth (Sharma and Dhakal, 1994; Dritsakis, 2005). **The third view**, which is a combination of the first and the second views, suggests that there can be a bilateral causal relationship between exports and economic growth (Hatemi, 2002; Dritsakis, 2005)

**Final, the fourth view** is that there is no causal relation between exports and economic growth, namely exports and economic growth are both the result of the development process and technological change (Yaghmaian, 1994; Dritsakis, 2005). Based on the above theoretical review, the relationship between exports and economic growth is in the inconclusive way. Due to that, we have reviewed the existing studies to get the cues in the export, import and economic growth through the empirical review in Asian, African, European United States, Japan, China, Iran context.

### **In the Asian Perspective:**

**Kogid, Mulok, Ching, Lily, Ghazali and Loganathan (2011)** analyzed the relationship between the economic growth and the import in Malaysia from 1970 to 2007. Results show that there is no co integration exists between economic growth and import, but there exists bilateral causality between economic growth and import. Results also show that import could indirectly contribute to economic growth, and economic growth could also directly contribute to import. These findings may be vital for future economic growth policy.

**Usman, Ashfaq, and Mushtaq (2012)** investigated the impact of export on the economic growth in Pakistan. Independent variables in the study include Export, Inflation and Real Exchange Rate. Ordinary Least Square has been used for empirical analysis of relationship of export and economic growth for 30 years (1980-2009). Results show that there is strongly positive and significant effect of export, Inflation and Real exchange rate on economic growth. These results are acceptable because inflation and Real exchange rate have mixed effect on

Economic Growth. Research gives policy makers an approach to map out the future policy standards for boosting exports in order to avail the opportunity of economic growth.

**Khan, Umar, Zaman, Ahmad and Shoukat (2012)** have approached the study on exports, imports and economic growth nexus. The study uses the Granger Causality and Co – integration tests to examine the long run correlation among economic growth, exports, and imports of Pakistan taking time series data for the period 1972- 2009. Results indicated that, both exports and imports are considered an essential part for economic growth of Pakistan. Moreover, economic growth has an important impact on exports and imports. Further, a successful and sustained economic growth requires growth of both exports and imports.

**Kim, Lim and Park (-----)** have Investigated the effect of imports and exports on total factor productivity in Korea during 1980-2003. Researchers found that Granger causality from imports to total factor productivity (TFP) growth, but no causality from exports to TFP growth. Researchers also investigated the impact of trade and other variables on TFP growth. According to the results, imports have a significant positive effect on TFP growth but exports do not. In addition, results indicated that the positive impact of imports arises not only from the competitive pressures associated with the imports of consumer goods but also from technological transfers embodied in imports of capital goods from developed countries.

International trade, as a major factor of openness, has made an increasingly significant contribution to economic growth. Chinese international trade has experienced rapid expansion together with its dramatic economic growth which has made the country to target the world as its market. In this context, **Sun and Heshmati (2010)** evaluated the effects of international trade on China's economic growth through examining improvement in productivity. Both econometric and non-parametric approaches are applied based on a 6-year balanced panel data of 31 provinces of China from 2002 to 2007. The study demonstrates that increasing participation in the global trade helps China reap the static and dynamic benefits, stimulating rapid national economic growth. Both international trade volume and trade structure towards high-tech exports result in positive effects on China's regional productivity. The eastern region of China has been developing most rapidly while the central and western provinces have been lagging behind in terms of both economic growth and participation in international trade.

**Rahmaddi and Ichihashi (2011)** have approached the study on exports and economic growth in Indonesia: A causality approach based on multi – variate error correction model. Study concluded that , significance of both exports and economic growth to economy of Indonesia. In addition, researchers found no supporting evidence of positive causality from intermediate imports to GDP per capital.

#### **In the African Context:**

**Shehu and Youtang (2012)** examined the causal relationship between exchange rate volatility (ERV), trade flows and economic growth of the sub-Saharan African countries with the reference to Nigeria which is considered as small open economy. The empirical study has been based on a time series data over the period of 1970-2009. Researchers applied new advances in the field of time series econometrics to provide more reliable estimates. The results indicate significant effects of ERV on trade flows and economic growth of Nigeria. The finding support the preference of flexible exchange rate regime over the fixed regime as it facilitates more trade flows in Nigeria. Researchers recommend effective diversification of the Nigeria economy by encouraging more manufacturing firms' production.

#### **In the Portuguese context**

**Francisco (2000)** investigated the Granger-causality between exports, imports, and economic growth in Portugal over the period 1865 - 1998. Findings revealed that, more interestingly, there is no kind of significant causality between import- export growth. Further, researcher concluded that the growth of output for the Portuguese economy during that period revealed a shape associated with a small dual economy in which the intra-industry transactions were very limited

#### **In the Iran context:**

**Taghavi, Goudarzi, Masoudi, and Gashti (2012)** investigated the import, export and economic growth in Iran over the period 1962- 2011. The role of the import and export variables in the investigation of economic growth output co integration analysis is emphasized, enabling one to test for the cases direct long run relationship, indirect long run relationship, and impulse, response function between export and import and economic growth.

The empirical results did confirm a long run relationship between the variables considered. Based on results, export had direct and positive relationship with economic growth in long run. Also import had a significant and negative relationship with economic growth then import had negative effect on economic growth in long-term. Researchers also saw a shock on the export has had a positive effect on economic growth; the other hand a shock on import error term had not much effect on economic growth so a shock on import could not positive effect on economic growth.

**In the Developed countries’ perspective: (USA, EU & Japan)**

**Dritsakis, (2005)** investigated the relationship between exports and economic growth in the three of the largest exporting countries in the world, such as European Union, United States of America and Japan. For this purpose researchers have used Granger causality analysis based on error correction model. The results of the study suggested that exports have a causal effect on the development process for the countries of European Union, USA, while there is no causal relationship between the examined variables for Japan. This indicates the presence of a common trend or a long-run relationship between the variables of these examined countries, while there is no long-run relationship between for the variables of Japan. The results of causality analysis suggest that there is a “strong bilateral causal relationship” between exports and economic growth for European Union consistent with the studies in the EU. While the results for Japan suggest that there is not either a long run relationship or any causality between exports and economic growth.

Based on the above research arguments in the theoretical and empirical context, we have formulated the hypotheses as:

**H1: There is a significant relationship between export and economic growth.**

**H2: There is a significant relationship between import and economic growth.**

**H3: There is a significant impact of export on the economic growth.**

**H4: There is a significant impact of import on the economic growth.**

**Methodology**

**Data collection**

Secondary data which are collected from the Central bank reports, Sri Lanka have been utilized in this study. Further, textbooks, journals, magazines in the Economic perspective were utilized for this study.

**Sample**

This study was conducted in Srilankan perspective, especially on export, import, and economic growth context. Data on the export, import and economic growth from the year 1970 to 2010 were collected for the study purpose.

**Data analysis method**

Time series analysis was carried out to identify the trends over the last forty years on the export, import and economic growth. And, Regression analysis is used to find out the significant impact of export and import on the economic growth. ( Eviews - 5 version have been utilized in this study )

**Research Model**

In this study, Economic growth is a function of export and import. In which, separate models have been utilized.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \epsilon_i$$

According to the above model and hypotheses development, we can construct the new research models for the study.

$$EG = \beta_0 + \beta_1 EX + \epsilon_i \quad \text{..... ( 1 )}$$

$$EG = \beta_0 + \beta_1 IM + \epsilon_i \quad \text{..... ( 2 )}$$

**Where:**

**EG** = Dependent variable (Economic Growth)

**β<sub>0</sub>** = Intercept

**β<sub>1</sub>** = Population slope

**EX** = Independent variable (Export)

**IM** = Independent variable (Import)

**ε<sub>i</sub>** = Random Error

**Design of the variables:**

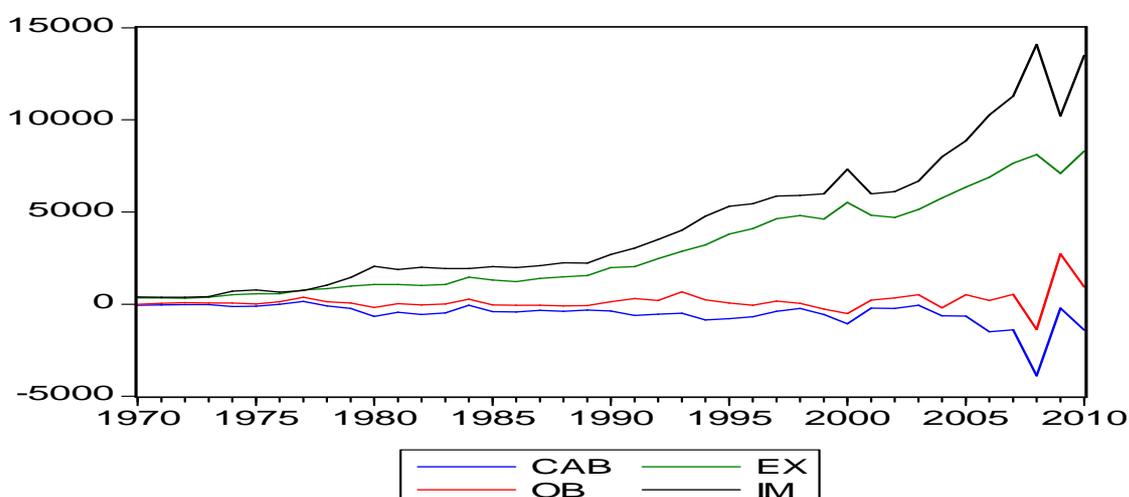
The following table gives a clear picture regarding the variables and measurements used in this study.

Table No 1: Design of the variables

Concept	Variables	Indicator	Measures	Symbols
Economic Growth Rate	Gross domestic product	Gross domestic product growth rate in the Fixed price	( Present year GDP – Previous year GDP) / Present year GDP * 100	GDP
Export	Export Income	Export income ( in the united state dollar )	Present year Export income	EX
Import	Import expenses	Import expenses ( in the united state dollar )	Present year import expenses	IM

## Results and Interpretation

### Time Series Analysis



#### Where:

EX = Export

IM= Import

CAB= Current Account Balance

OB= Overall Balance

According to the time series analysis, researchers utilized the variables as export, import, current account balance and overall balance to explain the trend in Sri Lankan external sector. Export income and import expenses of the Sri Lanka have been increasing since 1970, and also, we observed that, continuous increase in export income and import expenses have been recorded especially from 1970. After the 2000, both export income and import expenses have been increased rapidly comparing with other previous decades. Meantime,

Import expenses are higher than the export income in the Sri Lankan context over the last 40 years. Further, Sri Lanka experienced the negative current account balance over the 40 years except in 1978.

### Correlation Analysis

The purpose of correlation analysis is to find out the significant relationship between export, import and the economic growth rate. Table No 02 presents the results of the correlation analysis.

Table No 2: Correlation Analysis

	EG	EX	IM
EG sig	<b>1</b>	<b>.355</b> .023	<b>.391</b> .012
EX sig		<b>1</b>	<b>.987</b> .000
IM sig			<b>1</b>

According to the Correlation analysis, there is a significant relationship between export and the economic growth, which is significant at 0.05 levels ( $P < 0.05$ ). Further, the relationship between two variables is in the positive trend. **Hence the H1 is accepted.**

In the import sector, there is a significant relationship between import and the economic growth, which is significant at 0.05 levels ( $P < 0.05$ ). Further, positive significant relationship has been found. **Therefore, the H2 is also accepted.**

Meantime, researchers observed that, export and import have the strong positive relationship, which is beyond the 98 percent.

### Regression Analysis

The purpose of Regression analysis is to find out the significant impact of export and import on the economic growth.

In the regression analysis, the basic assumption as the multi co linearity problem should be tested. Because, there is a high chance to the multi co linearity problem in this study, in which, export and import have the strong positive relationship, which is beyond the 98 percent. Based on it, we have done the test that, whether the auto correlation problems are in the study or not. The answer was, yes, researchers have identified the auto correlation problem (Based on the Variance Inflation Factor). Therefore, researchers created the separate models for the independent variables as export, import with the dependent variable as economic growth.

### Export Vs Economic Growth

Table No 3: Regression analysis for export on the economic growth

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Export	0.000282	0.000119	2.375056	0.0226
Constant	3.835539	0.459624	8.344955	0.0000
R-squared	0.126362	Mean dependent var		4.680488
Adjusted R-squared	0.103961	S.D. dependent var		1.968530
S.E. of regression	1.863398	Akaike info criterion		4.130231
Sum squared resid	135.4178	Schwarz criterion		4.213820
Log likelihood	-82.66973	F-statistic		5.640892
Durbin-Watson stat	1.559642	Prob(F-statistic)		0.022559

According to the output in the regression analysis, the adjusted R – squared value indicated that, 10 percent of the variation has been found. It means, 10 percent of the economic growth has been influenced by the export sector. In addition, 10 percent of the influence or impact is in the significant level ( $P < 0.05$ ). Meantime, 90 percent of the economic growth has been influenced by other factors, which is also in the significant level. **Hence, H3 is accepted.**

### Import Vs Economic Growth

Table No 4: Regression analysis for import on the economic growth

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Import	0.000207	7.80E-05	2.649555	0.0116
Constant	3.793686	0.440652	8.609264	0.0000
R-squared	0.152545	Mean dependent var		4.680488
Adjusted R-squared	0.130815	S.D. dependent var		1.968530
S.E. of regression	1.835262	Akaike info criterion		4.099802
Sum squared resid	131.3592	Schwarz criterion		4.183391
Log likelihood	-82.04594	F-statistic		7.020142
Durbin-Watson stat	1.568693	Prob(F-statistic)		0.011580

According to Table No 4, the adjusted R – squared value indicated that, 13 percent of the variation has been found. It means, 13 percent of the economic growth has been influenced by the import sector. In addition, 13 percent of the influence or impact is in the significant level ( $P < 0.05$ ). *Therefore, H4 is accepted.*

### Conclusion

Based on the overall study, in the Sri Lankan context, the export and import have the significant positive relationship, and also, both export and import have the significant impact on the economic growth. Further, the export and import have been associated by 98 percent, which denotes that, there is a strong positive association between export and import.

In the supportive way, Usman, Ashfaq and Mushtaq (2012) found that, the export has the significant influence on the economic growth in the Pakistan context. Further, Kogid, Mulok, Ching, Lily, Ghazali and Loganathan (2011) noted that, in the Malaysia, the import have indirect relationship with the economic growth, which is also in the significant level.

Meanwhile, we found that, there is a strong positive relationship between export and import in the Sri Lankan context. In the import sector, the intermediate goods have the great share comparing with consumer and investment goods. Especially in the intermediate goods, the textile related raw material has the major share. Meantime, in the export earnings context, the earnings from textile play the great role in the Sri Lanka. Further, export value index has been diminished in 2007 suddenly. The same incident has been occurred in the import value index.

Table No 05: Performance of the external sector

Year	Indices	value
2006	Export value index	261.3
	Import Value index	308.3
2007	Export value index	86.8
	Import Value index	82.5
2008	Export value index	90.1
	Import Value index	100.6

Based on the table, performance of the external sector was in the problematic way. Especially in 2007, both export and import value indices have been decreased dramatically. Some scholar sated that; financial crisis might be big reason for the particular incident. In contrast, Kelegama, (2013) has pointed that global economic downturn is not the only reason for the low export growth in Sri Lanka. In further research, we have to check the performance of the external sector in the Sri Lankan perspective. Finally, we have suggested that, the small medium enterprises should be motivated towards export orientation. Meantime, the restrictions in the import of the raw materials to the industries should be implemented in the flexible way through the fiscal and monetary policy. Further, the srilankan government should formulate the industrial structure master plan in order to build an export oriented system. In nutshell, Entrepreneurship is a key driver of our economy. Small business started by entrepreneurially mined individuals creates wealth and high majority of employment opportunities.

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