

FOREIGN TRADE-ECONOMIC GROWTH NEXUS: EVIDENCE FROM SRI LANKA

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INTRODUCTION

The trade growth nexus has received much attention in the broad literature during the last few decades. The change in development thinking mainly contributes to this after the 1990s with the decline of socialism and the worldwide spreading of globalization. Further, Haq et al. (2021) clearly stated that trade- growth nexus had been hotly debated since the second wave of globalization in 1985. This tendency thrives more by the encouragement and continuous advice from the World Trade Organization (WTO), International Monetary Fund (IMF), and World Bank to move towards more liberal policies. Moreover, lessons from the faster-developing nations such as Hong Kong, Taiwan, South Korea, China, and India have forced policymakers to exercise more liberal policies with trade promotion. As a result, most developing countries shift towards an export-led growth strategy. Trade openness leads to efficient resource allocation, economies of scale, productivity improvement through technological advancement, foreign direct investment, and poverty eradication.

In the literature, trade openness was measured by the aggregate exports and imports ratio over Gross Domestic Product (Dollar & Kraay, 2003). Economists who advocate the export-led growth hypothesis consider exports can perform as an "engine of growth" (Eusuf & Ahmed, 2007). Trade facilitates growth mainly through resource allocation and productivity. The theoretical base for trade openness and growth originated from the neoclassical theory due to the success of the free market system. According to the absolute advantage and comparative advantage theory, international trade offers more comprehensive access to the world market and improves productivity with a cost advantage.

Further, endogenous growth theory identified a positive association between trade and economic growth (Lakmali & Dunusinghe, 2015). However, the empirical literature on trade growth nexus has been inconclusive and ambiguous as the previous findings were mixed (Eusuf & Ahmed, 2007). Most studies have identified a positive association between trade openness and economic growth (Herath, 2016). Ali and Abdullah (2015), reported no meaningful relationship between the growth rate of real GDP and trade openness. Nevertheless, some studies prove that trade negatively affects economic growth, and most of those studies are confined to developing countries (Warner, 2003). The mixed results reported by the empirical literature were due to the effect of the transmission mechanism of trade on growth. Thus, a country-specific analysis is essential in this nature in order to have a clear understanding of the trade growth nexus. The main objective of this paper is to investigate the link between International trade and economic growth in Sri Lanka during the post-liberalization period.

METHODOLOGY

This paper examines the impact of International trade on economic growth in Sri Lanka using time series data for the period 1977-2021. This study adopts a deductive research methodology to address the research questions and develops a model framework based on the literature. In order to assess the relationship between international trade and economic growth, the present study uses the real GDP growth rate as a dependent variable. A set of explanatory variables complemented with International trade variables is the proportion of the total value of exports and imports of a country's goods and services to the total GDP, and a set of macro variables such as gross domestic capital formation as a proxy variable for investment, Implicit price index as a proxy variable for the inflation rate, government expenditure as a percentage of GDP, labor force participation rate for the period 1977 to 2021. The relevant time series data were collected from the Central Bank's annual reports for 1977-2021. The following econometric model was specified for the study.

$$A1 \ln TOP_t + A2 \ln FD_t + A3 \ln GDCF_t + A4 \ln INFR_t + A5 \ln GOVE_t + A6 \ln LFPR_t + \varepsilon_t$$

Where GDPG is real GDP growth, TOP is International trade, FD is financial development, GDCF is investment ratio, INFR is the inflation rate, GOVE is government expenditure ratio, and LFPR is labour force participation rate. Unit root test was applied to test for the stationarity of the time series data by using the Augmented Dickey-Fuller test (ADF). Johansen Co-integration test was used to investigate the long-run relationship between trade openness and economic growth rate. Vector Error Correction (VECM) was used to test the short-run dynamics of the model.

RESULTS AND DISCUSSION

ADF test results reported that all the variables in the system are non-stationary at their levels. However, it becomes stationary at the first difference indicating that variables in the system are integrated in order (I). The optimal number of lag values, 2 for the endogenous variables of GDPG, TOP, FD, INFR, GDCF, GOVE, LFPR, was selected under the VAR lag order selection criteria. The Johansen co-integration test is used to examine the extended-run equilibrium model. The co-integration results, trace test, and maximum Eigenvalue statistics were used to indicate the long-run relationship among the variables selected in its initial form. According to the Co-integration test, trace statistics reject the null hypothesis that there is no co-integrated vector (None); there is at most one co-integrated vector (At most 1) at 0.05 levels. Further, the Co-integration test Maximum eigenvalue statistics rejects the null hypothesis that there is no co-integrated vector (None), there is at most one co-integrated vector (At most 1), and there is at most two co-integration (At most 2) at 0.05 levels. Thus, it indicates that trace statistics and maximum eigenvalue identified two co-integrating equations and three co-integration equations, respectively, at 0.05 levels, indicating a long-run relationship between the variables in the model and following a long-run path. The long-run regression equation is given in Table 1. According to the long-run linear regression analysis, trade openness has a negative impact on economic growth, but it is not significant. Thus nothing more can be said about it. However, financial development significantly negatively impacts economic growth (Table 1). It is noteworthy to highlight the significant positive impact of capital formation on economic growth in Sri Lanka. All other explanatory variables are not statistically significant in the model. Having identified the co-integration relationship

between the variables in the model, the researcher used Vector Error Correction modeling (VECM) to examine the short-run dynamics of the extended run model.

Table 1 Long-run Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.056509	0.195345	0.289277	0.7739
LINFR	0.001330	0.007919	0.167967	0.8675
LGDCF	0.139667	0.039620	3.525123	0.0011
LGOVE	-0.036622	0.046826	-0.782093	0.4390
LLFPR	0.009387	0.058772	0.159717	0.8739
LTOP	-0.027182	0.035293	-0.770188	0.4460
LFD	-0.100204	0.028325	-3.537709	0.0011
R-squared	0.370046	Mean dependent var		0.054107
Adjusted R-squared	0.270579	S.D. dependent var		0.037598
S.E. of regression	0.032111	Akaike info criterion		-3.897225
Sum squared resid	0.039182	Schwarz criterion		-3.616188
Log likelihood	94.68756	Hannan-Quinn criter.		-3.792457
F-statistic	3.720308	Durbin-Watson stat		2.013633
Prob(F-statistic)	0.005236			

Having identified the co-integration relationship between the variables in the model, the researcher used Vector Error Correction modeling (VECM) to examine the short-run dynamics of the extended run model. The VECM results indicate that few variables in the short-run model indicate a significant relationship with the dependent variables GDPG.

Table 2 VECM Results

Coefficient	Std. Error	t-Statistic	Prob.	
CointEq(1)	-0.015	0.032	-0.450	0.065
D(GDPG) (-1)	0.503	0.243	2.071	0.048
D(GDPG) (-2)	0.059	0.189	0.313	0.756
D(LGDCF)(-1)	0.100	0.089	1.118	0.273
D(LGDCF)(-2)	-0.126	0.092	-1.365	0.183
D(GOVE)(-1)	-0.033	0.109	-0.302	0.764
D(GOVE)(-2)	0.041	0.093	0.448	0.657
D(LINFR)(-1)	-0.005	0.011	-0.451	0.655
D(LINFR)(-2)	0.012	0.008	1.454	0.157
D(LLFPR)(-1)	-0.006	0.144	-0.042	0.966
D(LLFPR)(-2)	0.030	0.159	0.192	0.848
D(LTOP)(-1)	-0.326	0.133	-2.449	0.021
D(LTOP)(-2)	0.0375	0.128	0.292	0.772
D(LFD)(-1)	0.066	0.122	0.521	0.606
D(LFD)(-2)	-0.008	0.098	-0.008	0.935
Constant	-0.007	0.007	-1.005	0.323
R-squared	0.626	Mean dependent var		-0.000
Adjusted R-squared	0.410	S.D. dependent var		0.049
S.E. of regression	0.037	Akaike info criterion		-3.437
F-statistic	2.905	Durbin-Watson stat		2.192
Prob(F-statistic)	0.008			

The short-run coefficients of the model indicate that the immediate impact of the log difference variables and the subsequent year impact is not significant in most cases except GDPG and the TOP. The VECM results indicate that trade openness negatively impacts economic growth in the short run. This study reveals that the actual impact of trade openness can be felt after one year of time lag. This model is suitable to adopt since diagnostic testing indicates that variables are normally distributed; the Breusch Godfrey Serial correlation LM test denotes that the model is not suffering from a serial correlation problem, and the heteroscedasticity test indicates a higher probability value than 0.05, and it indicates this model is homoscedastic.

CONCLUSIONS AND IMPLICATIONS

The study's findings revealed that all the variables selected in the model are co-integrated, and a long-run association exists among the variables. In the extended run regression model, trade openness and financial development have a significant negative relationship with economic growth. The investment ratio has a significant positive impact on economic growth in Sri Lanka. According to the theory, trade promotes economic growth through capital allocation and allocative efficiency. However, extant studies argue that the debate on trade growth nexus is controversial, and it does not provide a unique answer on trade growth nexus. Thus, the finding of this study is confirmed by the recent literature, particularly on developing countries (Aslam, 2017; Warner, 2003). Moreover, the negative association between trade and growth may be due to the high import content of total trade. Thus, negative net foreign investment has a detrimental effect on economic growth in Sri Lanka. Accordingly, more attention should be given to promoting export while discouraging imports of non-essential goods in order to promote economic growth in Sri Lanka.

Keywords: Economic growth, gross domestic capital formation, international trade

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