FOREIGN INDEBTEDNESS AND ECONOMIC GROWTH: EVIDENCE FROM SRI LANKA

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Abstract

In the sense of the developing world, foreign debts are earned in order to meet the expenses of the government. Consequently, the research aims to assess the effect of foreign debt on economic growth in Sri Lanka using a review of data obtained from the Central Bank of Sri Lanka's annual report for the period 1995 – 2018.The analysis considered international debt as the independent variable, and the dependent variable was the gross domestic product. Labor power, income, and exports were also seen as variables of influence. Based on the results of the pooled standard least squares process, it was found that the foreign debt and economic growth have a substantial negative effect. This explains that the increase in foreign debt of the country would cause in a reduction in economic growth. In respect to control variables, it was found that savings and exports shows a significant impact and labour force does not show any significant impact on economic growth.

Keywords: Foreign Indebtedness, Gross Domestic Product, Economic Growth, Exports, Sri Lanka.

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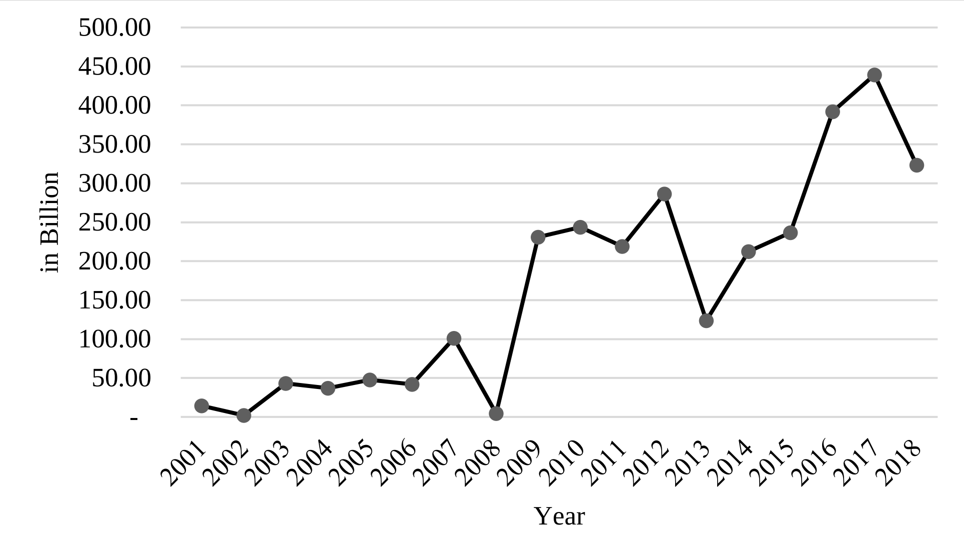
1. Introduction

Over the past years, it was observed that the foreign debt to Sri Lanka has been continuously increasing. Generally, foreign debt is a challenging factor for developing countries such as Sri Lanka due to the constant balance of payment deficits. Therefore, it is important to find or analyze the benefits to the country of the burden of foreign debt. The driving forces to government investment via foreign borrowings are mentioned as (i) low savings due to the budget deficit, (ii) deficits in the external sector mainly due to high import bills. (Kumara and Cooray; 2013). Kumaras and Cooray also argued that the stable increase in foreign debt for the countries with low income, would become a burden since the debt servicing becomes a conditional requirement of the debt providing countries. Therefore, improper management of foreign debt would badly affect the economic growth of such countries. Hence, it is required to use the borrowed money to invest in financially productive ways to enhance the future income level (Kharusi and Ada; 2018).

At the end of 2018, the total outstanding debt of Sri Lanka stood at LKR 9,559,463Mn, 59% of country's GDP. Also, this has significantly increased over the past years. Hence, there is a reduction in outstanding foreign debt from the year 2013 to 2014 where the total debt to GDP has been reduced from 60% to 54%. Therefore, the government is facing a huge range of challenges to balance its' budget. In addition to this, by the end of 2019, Fitch affirmed Ratings downgraded Sri Lanka's long-term foreign and local currency Issuer Default Ratings (IDR) at 'B'. Meanwhile, Moody's Investor Services also confirmed Sri Lanka's sovereign rating at "B2" with the 'stable' viewpoint, while Standard and Poor's (S&P) long term rating stood at "B" with a "negative" outlook.

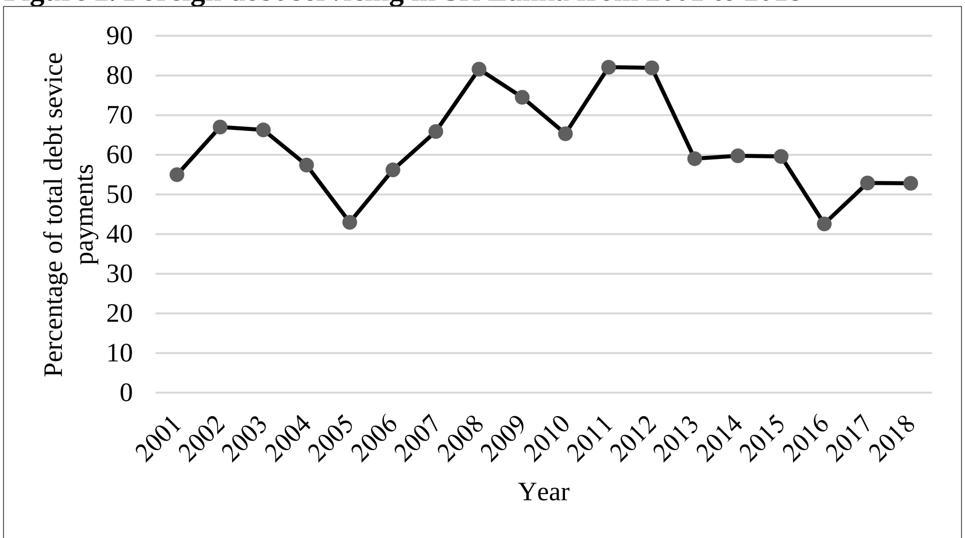
Recently, Sri Lanka borrowed, 4.9 billion US dollars through the issuance of ISBs during 2018 and so far during 2019. Central bank reported that, in April 2018, the government issued the 12th ISB, which was considered as the largest offshore bond offering ever by Sri Lanka and raised US dollars 2.5 billion. Initially, 1.25 billion US dollars each with 5 year maturity at a yield rate of 5.75 % and a 10 year maturity at a yield rate of 6.75 %. Following that, in early 2019, for the amount of 2.4 billion US dollars, the ISB was issued with two tenures of maturity amounting to US dollars 1.0 billion with a 5 year maturity at a yield rate of 6.85 per cent and US dollars 1.4 billion with a 10 year maturity at a yield rate of 7.85 per cent per annum. In addition, a Foreign Currency Term Financing Facility (FCTFF) of US dollars 1.0 billion was gained in October 2018.

Figure 1: Foreign debt in Sri Lanka from 2001 to 2018



Source: CBSL Statistical Bulletin, 2018

Figure 2. Foreign debt servicing in Sri Lanka from 2001 to 2018



Source: CBSL Statistical Bulletin, 2018

The figures 1 and 2 above display the trend of Sri Lanka's foreign debt financing and debt servicing from 2001 to 2018 respectively. The graphs (1 and 2) explain that there is a dramatic increase in foreign financing immediately after the war ended in early 2009. However, the level has fallen down during the period of 2013 and further had increased over the following years and it indicated a significant decline in the year 2018. The debt servicing fluctuated in such a way that the economic growth and development that was inevitably the initial necessity for foreign borrowing became a secondary problem as the government was struggling to fulfill the debt servicing obligation using a large part of the income of the country.

Few studies examined the foreign indebtedness in developing countries like Sri Lanka. (Kumara & Cooray, 2013; Kumarasinghe & Purankumbura, 2015; Ekanayake, 2011). However, most of the research work were carried out in developed countries and very small number is known about the impact of foreign indebtedness on economic growth in the Sri Lankan context. Thus, this study developed to fill the research gap.

Research problem

Several studies were carried out in order to find out the impact of foreign indebtedness on economic growth and proposed mix of findings. Since economy of a country depend on the level of debt that the country owes to foreign countries, the proper management of foreign debt has become crucial. However, in Sri Lanka the foreign financing shows an overall increase in pattern other than abrupt decline in some years (Table 01).

Table 01: Foreign financing over the past 10 years (LKR in Mn's)

Year	Foreign Debt
2008	4.6
2009	230.8
2010	243.8
2011	219.0
2012	286.5
2013	123.70
2014	212.5
2015	236.8
2016	391.9
2017	439.2
2018	323.5

Source: CBSL Statistical Bulletin, 2018

Therefore, the economic development due to the foreign finance is a requirement for a country. If there is any failure to achieve growth, it would become a burden for the country and the people. By considering this problem the researcher developed this study in order to find out the real impact of foreign financing towards the economic growth in the Sri Lankan context. Therefore, the research problem could be stated as ''To what extent does the foreign indebtedness have a significant impact on economic growth in the Sri Lankan context.''

Objective of the study

The objective of this paper is to study the impact of foreign indebtedness on economic growth in Sri Lanka.

Significance of the study

Economic growth can only be accomplished by integrating many determinants, such as foreign assistance, foreign direct investment, fiscal policy, employment, trade, production of human resources, demographics, monetary policy, exports, the creation of gross fixed capital etc.(Chirwa & Odhiambo, 2016; Dritsakis, Varelas & Adamopoulos, 2006). However, emerging countries like Sri Lanka, utilize more foreign financing for the development requirements. (Osuagwu & Orbunde, 2015). Therefore, analyzing the benefits out of the expense of debt servicing of the country is crucial. Hence, the importance of this study is identified as this study provides an overview of the significance of appropriate management over the borrowing of sovereign debt and it provides evidence of whether the foreign indebtedness affects economic growth in Sri Lanka.

2. Literature Review

There are some theories related to the foreign indebtedness on economic growth. In such a way, the theory 'debt overhang' propounded by Myers (1977), indicates that a debt burden that would not enable an entity to take further debt to finance its' upcoming projects. However, this includes the entities that are profitable enough to repay the outstanding debt over time and the level of current earnings only repaid to existing debt holders. Therefore, this situation would lead for an entity to discover solutions to meet the other requirements by imposing relevant strategies. The same can also be applicable to a situation where a government with excess debt is more than the financial capacity to manage the debt term and provisions for debt servicing and repayment. Consequently, the required debt service is expected to be an growing function of the level of economic growth in the country. (Adedoyin, Babalola, Otekunri & Adeoti, 2016).

Also, among the dependency theories' several aspects, foreign capital reliance is related to this study, where this has been explained that a country's influence on another country probably the borrower country, due to the debt. When a country becomes unable or face bad situations to repay the loan, the country impliedly depends on the debt provider.

With the empirical review, different aspects of contributions to the economy are argued by different authors. Some have concluded that more sovereign debt is harmful to the economy. Kumarasinghe and Purankumburain (2015) analyzed the impact made by the debt stock of the economy on the long-term growth using 50 years data from 1963 in the Sri Lankan context. In this study, Economic growth, Savings, Investments, Trade openness and Budget deficit were used as independent variable and public debt was used as dependent variable in order to test the hypothesis. The findings of the study concluded that debt had a non-linear relationship and it explained that debt would create negative impact on the economic growth rate.

Kumara and Cooray (2013), investigated the exact relationship (either positive or negative) between public debt and economic growth in Sri Lanka based on the time period from 1960 to 2010. The study incorporated GDP per capita growth rate, GDP per capita income, public debt to GDP ratio, growth in gross capital formation to GDP ratio, and population growth as independent variable, terms of trade growth, growth in openness, growth in literacy rate and government deficit as control variables and public debt as dependent variable. The results explained that there is a non-linear and negative impact between public debt and economic growth.

Omodero and Alpheaus in 2019 examined the effect of foreign debt on the economic growth of Nigeria using data collected from the World Bank and Central Bank of Nigeria Statistical Bulletin from 1997 to 2017. Including nominal gross domestic product, foreign debt stock, foreign debt servicing, inflation rate and exchange rate as an independent variable, nominal gross domestic product as a dependent variable, the results of the regression showed that foreign debt had a major negative effect on economic growth whereas foreign debt servicing had a strong and significant positive impact on growth. Malik, Hayat and Hayat in 2010, investigated to explore the relationship between external debt and economic growth in Pakistan using the data from 1972 to 2005 using time series econometric technique. The study included external debt and debt servicing as independent variable and gross domestic product as dependent variable to test the research question. According to the findings of the study, external debt showed a negative significant relationship on economic growth. It also found that debt servicing also explored a negative significant relationship with economic growth.

Pathberiya and Wijeweera in 2005, gone through the external debt situation in Sri Lanka using five decade observations before 2005 found that Sri Lanka should not be too complacent about its external debt situation although it received much needed foreign debt assistance in the form of debt write offs and debt moratoriums from its creditors after the disastrous Day tsunami.

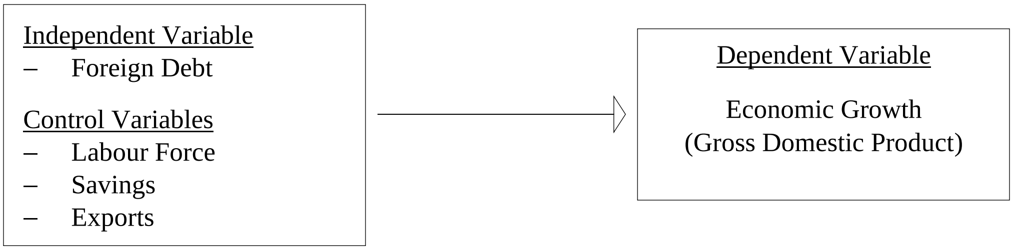
In contrary to the above, Casares in 2015 examined the relationship between external public debt and economic growth and revealed that the country risk depended positively on the level of external public debt.

Mohamed (2018) analyzed the effect of external debt on economic growth of Sudan based on the annual time series for the period 1969-2015. Ratios of external debt to exports, exchange rate and foreign direct investment were used as the independent variable and gross domestic product was used as the dependent variable on this study to test the impact. The study findings showed that external debt proxied by the ratio of external debt to exports has made a positive contribution to the Sudanese economy. One research described the effect of external debt on Ghana's economic development using the 1970-2017 annual time series. The study's findings revealed that external debt inflows drive both long-term and short-term growth in Ghana (Matuka & Asafo, 2018).

Conceptual framework

After careful study of the review of literature the following conceptual model is developed by the researcher.

Figure 3: Conceptual framework



Source: Constructed by authors

Operationalization

Table 2: Measurement of variables

Variables	Acronyms	Measures
Dependent Variable		
Gross Domestic Product	GDP	Log formation of GDP
Independent Variable		
Foreign Debt	FDEBT	Log of External debt stocks
Control Variables		
Labour Force	LBFOR	No of heads of the labour force
Savings	SAV	Gross National Savings
Exports	EXP	Exports of goods and services

Source: Constructed by authors

Hypothesis of the study

In this research, the following hypotheses are formulated to examine the relationship between variables.

Hypothesis (H1): Foreign indebtedness significantly impact on economic growth.

3. Methodology

Data collection and sampling

This study deployed a casual research design in order to derive the purpose of the study. Kothari (2004), defined causal research as the impact of one variable on another and this is consistent with this study which seeks to establish the effect of foreign debt on economic growth. In this study, the research utilized the econometric analysis techniques of ordinary least squares (OLS) multiple regression techniques. The study made use of a secondary form of data from 1994 to 2018. All the data employed in this study were collected from the Central Bank of Sri Lanka Statistical Bulletin, 2018 edition and the annual report 2001 and 2018.

Regression equation

To examine the extent to which foreign debt affects economic growth of Sri Lanka, the researcher estimated the following multiple regression model that links foreign debt with economic growth:

$$GDPit = \beta_0 + \beta_1 FDEBT_{it} + \beta_2 LBFOR_{it} + \beta_3 SAV_{it} + \beta_4 EXP_{it} + \varepsilon_{it} \qquad \text{Model (1)}$$

Where;
GDP – Gross Domestic Product
FDEBT – Foreign Debt
LBFOR – Labour Force
SAV – Savings
EXP – Exports
ε – Error
i - Firms
t – Years

4. Empirical Results

Descriptive statistics

In order to make general observations about the collected data set, descriptive statistics are useful. They report on the trends and patterns of data and provide the basis for comparisons between variables.

Table 3: Summary statistics

	FDEBT	LBFOR	SAV	EXP	GDP
Mean	23230.21	8063956.	43675.14	10178.70	48192.39
Median	19264.18	8182017.	38539.19	10295.77	43229.62
Maximum	45995.53	8586360.	77822.01	15160.78	82650.51
Minimum	14006.23	7153529.	22775.71	5877.144	25409.17
Std.Dev	9737.504	414798.8	17504.99	2774.345	18415.30
Observations	24	24	24	24	24

Source: Constructed by authors

The above table shows the values of mean, median, standard deviation, minimum and maximum of the observations. Values of gross domestic production, foreign debt, labour force, savings and export values presented in the millions. According to the table, it can be identified that descriptive statistics for the variables were used in the analysis for our pooled sample. The pooled mean (median) GDP is 48,192.39$ (43,229.62$), respectively. The average of foreign debt is 23,230$ (the median is 19264.18$). With respect to control variables included in the model, the average of labor force is 8,063,956$ (the median is 8,182,017$). The average of savings is 43,675$ (the median 38,539$) and the average exports of the country was given by 10,178$ (10295$). These summary statistics indicated that the data used in this study is comparable to those used in prior research in the context of Sri Lanka.

Correlation analysis

Table 4 reports the Pearson correlation coefficients between the variables. To find out the relationship among variables correlation analysis was carried out.

Table 4: Correlation matrix of coefficients of regression model

Correlation Probability	FDEBT	LBFOR	SAV	EXP	GDP
FDEBT	1.000				

LBFOR	0.284	1.000			
	0.000	-----			
SAV	0.134	0.327	1.000		
	0.000	0.000	-----		
EXP	0.342	0.009	0.357	1.000	
	0.000	0.000	0.000	-----	
GDP	0.320	0.230	0.098	0.163	1.000
	0.000	0.000	0.000	0.000	-----

Source: Constructed by authors

Table 4 displayed above reports to the Pearson correlation coefficients between variables. Foreign debt and economic growth showed a positive relationship between two variables. However, the strength of the relationship is low. Labor force showed a positive and significant correlation with economic growth. Since, the correlation value shows an amount of 0.23, the strength of the relationship can be stated as low. Further, savings and exports also show a positive and significant relationship with economic growth. Regarding the correlation of savings and GDP, a value of 0.098 was stated. Therefore, it also explained as the lower strength in the relationship. Further, the significant impact between variables is evidenced with the regression analysis carried out by the researcher.

Furthermore, the above table 4 suggests that given that the observed correlation coefficients between independent variables are relatively low. It can be stated that the impact in-between labour force, savings, exports and foreign debt shows a p value of 0.000; impact in-between savings, exports and labour force shows a p value of 0.000; impact in-between exports and savings shows a p value of 0.000, multicollinearity should not be a serious problem in the study.

Regression analysis

The model is estimated using Pooled Ordinary Least Squares Method.

The Table 05 shows the estimated result of the model. R square shows that the model explained was 99.73 % of total variations of the dependent variable. It means that 99.73 % of the variations in dependent variable are described by both independent and control variables.

Table 5: Relationship between foreign debt and economic growth

Dependent Variable: GDP
Method: Least Squares
Sample: 1995 2018
Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	15554.48	9052.7460	1.7182	0.1020
FDEBT	-0.1486	0.0734	-2.0232	0.0251
LBFOR	-0.0022	0.0014	-1.6168	0.1224
SAV	1.0474	0.0759	13.8082	0.0000
EXP	0.8108	0.4127	1.9644	0.0343
R-squared	0.9973	Mean dependent var		48192.39
Adjusted R-squared	0.9967	S.D. dependent var		18415.30
S.E. of regression	1056.817	Akaike info criterion		16.9470
Sum squared resid	21220386	Schwarz criterion		17.1924
Log likelihood	-198.3636	Hannan-Quinn criter.		17.0121
F-statistic	1741.176	Durbin-Watson stat		1.1441
Prob(F-statistic)	0.000000			

Source: Constructed by authors

As observed, the results showed that foreign debt had a coefficient of -0.148 with t statistics of -2.0232 and with a p value of 0.0251. Thus, from the results, it could be stated that there is significant impact of foreign debt on economic growth. Also, the results indicated that one-unit increase in foreign debt would cause a reduction in 0.1486 units in economic growth. Particular finding of the study is supported with the previous findings of Kumarasinghe and Purankumbura, (2015), Kumara and Cooray (2013), Omodero and Alpheaus, (2019). With respect to control variables, labor force has a coefficient of -0.002, with t-statics of -1.617 and a p value of 0.1224. The results indicated that there was no impact in between labor force and economic growth (Spilioti, 2015; Senadza, Fiagbe, & Quartey, 2017). Savings had a coefficient of 1.047 with t statistics of 13.808 and with a p value of 0.0000. Therefore, it can be concluded that there is a strong positive significant impact in between savings and the economic growth of the country (Spilioti, 2015). Exports and economic growth also shows a positive significant impact on economic growth proxied by GDP. Since exports has a coefficient of 0.811, t statistics of 1.964 and a p value of 0.0343, it can be concluded that Sri Lanka's export shows a significant impact on 5% confidence level (Spilioti, 2015; Senadza, Fiagbe, & Quartey, 2017).

The results showed that the F-statistics indicates the value of 0.0000. The finding indicates that the model perfectly fits for the study. Durbin Watson test is a test used to detect auto correlation. From the above table Durbin Watson stat value is 1.144. This value is less than 3 indicating that there is no auto correlation issues.

5. Discussion and Conclusion

This study empirically provided evidence on the impact of foreign debt on economic growth proxied by GDP in Sri Lanka. This explored that the increase in foreign debt in Sri Lanka would cause a reduction in economic growth. Consequently, based on the findings of the study, the following conclusions were drawn. The presence of significant negative impact of foreign debt on economic growth implies that the accumulation of foreign debt is harmful to the economy and won't provide positive advantages to the economy. In case, the accumulation of foreign debt over the time would lead to debt overhang and the country would become dependent on the debt providing country. In addition to this, the borrowing country's major part of the resources would be transferred to the lender's country in order to maintain the country's credit worthiness (Omodero & Alpheaus, 2019). The same scenario is applicable to Sri Lanka based on the findings of the study. Other than foreign debt, savings of the country and exports showed a positive significant impact on economic growth. This reflect that the increase in country's savings as well as exports would lead to an increase on economic growth of the country (Spilioti, 2015). Continuously, the findings explore that in Sri Lankan perspective, the borrowings on foreign debt doesn't contribute to the labour force, since there was no significant impact found on economic growth due to labour force.

Therefore, it is recommended that to utilize the receipt on foreign debts on productive investments which would create more employment opportunities and boost the economy's performance. Hence, the proper decision on management of foreign debt is vital for the countries as well as for the entities which are at their initial stages on the business cycle. The findings of the impact of sovereign debt on economic growth would be fruitful information to the policy makers, industries seeking for foreign financing, students in economic arena, future researchers etc. Further, the findings of this study are most relevant to the-Sri Lankan context as well as for the emerging economies. The cross-sectional analysis including mix of developed and developing countries would provide more accurate results in terms of the findings of this study.

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