Banking Sector Development and Economic Growth in Sri Lanka: An Econometric Analysis

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ABSTRACT

Purpose: This study aims to explore the role of the banking sector in elevating the economic growth of Sri Lanka by identifying the short-run and long-run relationship between banking sector development and economic growth in Sri Lanka.

Design/Methodology/Approach: This study uses annual data for the period 1960 to 2019 from World Bank's Global Financial Development Database and World Development Indicators. Odedokun's model, which assumes the causation between financial development to economic growth, is employed using the bound test within the ARDL framework.

Findings: The estimated long-term parameter of the banking industry development indicator was found to be positively affected economic growth by supporting supply-led growth model. The estimations of the Error Correction Model provide a broad picture of the short-term relationship, and the results are highly consistent with the results of the long-term model. Granger Causality test found that the banking sector development granger cause to the GDP indicating a unilateral relationship.

Originality: This study differs from the existing studies, which focus on the neoclassical one-sector aggregate production model. Financial development is input along with other real sector variables to identify the short-run and long-run relationship with the help of a newly developed econometric approach.

I. Introduction

The most successful economies built sophisticated financial systems at an early stage of growth (Patrick,1966). Primarily, it fosters economic growth through capital accumulation and technical progress by increasing the savings rate, mobilizing and pooling funds, producing investment information, facilitating and encouraging foreign capital inflows, and optimizing capital allocation. Countries with more sophisticated financial systems expand quicker over time. A significant body of research suggests that this effect is causal: Financial development is not merely a byproduct of economic growth; it also contributes to it (World Bank, 2013). Especially Banks play an essential role in the

financial system since they provide liquidity to the entire economy while also modifying the risk characteristics of assets. There is, however, no agreement on the relationship between financial development and economic growth. The finance-growth nexus is a hotly disputed topic in the financial economics literature. There were initially two major schools of thought. The first school of thought supporters contended that financial development is required for economic expansion (Goldsmith, 1969; Levine, 1997; McKinnon, 1973; and Schumpeter, 1911). According to Schumpeter (1961), the Banking system plays a vital role in facilitating innovation and productive investment, especially through mobilizing funds, evaluating and selecting projects,

managing risks, and monitoring entrepreneurs in boosting technological innovation; the banking system helps the economic growth. According to Goldsmith (1969), the positive association between financial development and growth is primarily attributable to the efficient utilization of capital stock. Further, McKinnon (1973) argued that financial development is essential in supporting economic growth through high capital productivity. Moreover, Levine (1997) highlighted that the financial sector fosters economic growth through different channels, mainly (a) reducing risk in financial transactions by pooling and diversifying risk factors; (b) lowering the cost of financial intermediation by leveraging economies of scale and economies of scope; (c) mobilize savings and channel them into investment activities, and (d) optimize the allocation of resources available in the economy. Further King and Levine (1993) also outlined four ways in which the financial sector's development influences growth. They are as follows: the financial system promotes productivity improvement by selecting higher-quality entrepreneurs and projects, mobilizing external financing for these entrepreneurs, providing superior vehicles for diversifying the risk of innovative activities, and more accurately revealing the potentially large profits associated with the uncertain business of innovation. Therefore, Financial development is a fundamental pioneer for economic progress in this paradigm, called finance-led growth. It explores bank-based financial development as a predictor of economic growth and the causal chain that flows from financial development to economic growth.

However, the Neoclassical thoughts, who advocated for the second school of thought, contended that finance is not a key source of growth and the literature has long overemphasized the relationship between financial development and economic growth (Lucas,1988). Singh (1997), Andersen and Tarp (2003), and Ductor and Grechyna (2015) provided evidence supporting an adverse relationship between financial sector development and economic growth. However, Gerschenkron (1962) proposed that the contribution of financial development to economic growth is dependent on the economic backwardness of the economy and emphasized that economically disadvantaged countries require a more active financial system. According to Detragiache et al (2005), political instability and corruption are the primary causes of poor financial systems in low-income countries. As a result, they stated that efforts to increase prudential regulation and supervision should not be expected to generate rapid results due to poor policy implementation in low-income countries.

Considering Sri Lanka, the banking sector consists of Licensed Commercial Banks (LCBs) and Licensed Specialized Banks (LSBs), which dominate the financial system and account for the highest share of total assets. During the last decade, the banking industry in Sri Lanka has exhibited resilience to foreign and domestic economic shocks while contributing positively to the country's economic progress (Central Bank, 2014). The financial sector's contribution to the real economy has been facilitated by the increase in financial depth in Sri Lanka since the onset of regulatory reforms in 1977. Financial liberalization has contributed to a more favorable climate for the banking industry. Competition has kept the banking sector's growth momentum under liberalized market circumstances. Banks institutions have increased their banking products and services in a competitive climate fostered by banking sector changes. Especially reduction of Statutory Rate Requirements (SRR) and relaxation of rules on Non-Performing Loan (NPL) categories and deadlines to achieve the enhanced minimum capital requirements have benefited the banking sector. In addition to regulatory improvements, recent developments in financial infrastructure have aided the rise of the banking sector in Sri Lanka. According to Rajeevan (2019), the Sri Lankan banking sector changes are more focused on how they give services.

Especially customers have been pleasantly surprised by digitalized services such as cash deposit machines, withdrawal machines, mobile app capabilities, and passbook-free bank accounts.

Considering the banking sector development using M3, which assesses the economy's liquid liabilities as a percentage of GDP (A greater liquidity ratio indicates that the banking system is more active), Sri Lanka's banking structure has evolved systematically and shown considerable growth over the last decades.

Figure 1. Trend of Real GDP Per Capita and M3 (Liquid liabilities to GDP)
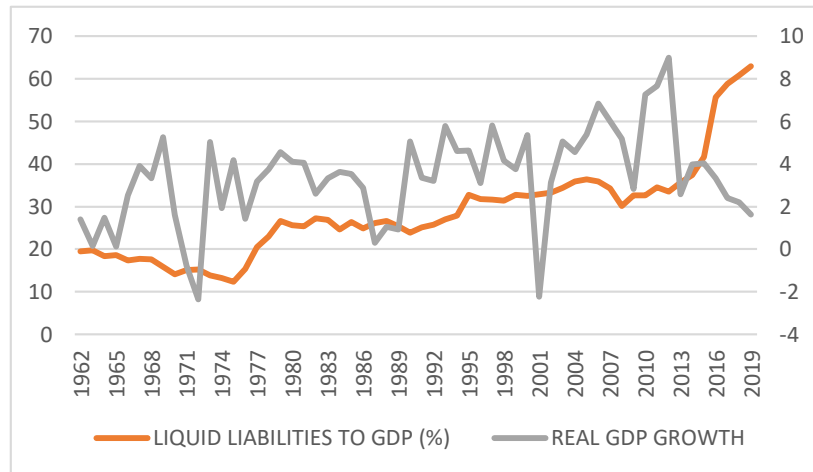
Source: World Development Indicators (2019)

On the other hand, Economic performance in terms of real GDP growth over three time periods (The pre-liberalization period before 1977, the post-liberalization period, including the conflict period 1978–2009, and the post-war period after 2009) recorded high volatility in Sri Lanka. Due to different internal and external shocks, Sri Lanka's real GDP growth has not been consistent over any of these eras, indicating a lack of economic resilience to diverse shocks. Despite three years of extremely high growth following the end of the conflict in 2009, the post-war period has had a lower average annual growth rate of 4.4% per annum. The strong growth years may be linked to the increase of demand in the economy and the revival of economic activity in conflict-affected areas following the war, rather than developments in the macroeconomic framework and structure of the economy. In line with this discussion, this study aims to explore the role played by the banking sector development in elevating the economic growth of Sri Lanka between 1980 and 2019 by exploring the short-run relationship between banking sector development and economic growth in Sri Lanka and examining the existence of a long-run relationship between banking sector development and economic growth in Sri Lanka. The rest of the paper is structured as follows; Section 2 covers the literature review, section 3 describes the methodology, section 4 describes the results, and section 5 concludes the research paper.

II. Literature Review

Various theories and reviews of empirical studies, both internationally and locally, on banking sector development and economic growth are examined in this section.

For example, in the cross-country analysis, Goldsmith (1969) demonstrated a positive link between financial development and GDP per capita for the first time, using an annual data set of 35 nations from 1860 to 1963.

Using cross-country data, De Gregorio and Guidotti (1995) discovered that financial development, measured by bank loans to the private sector as a percentage of GDP, is positively connected with growth. The study was done by Bittencourt (2012) based on Argentina, Bolivia, Brazil, and Peru from 1980 to 2007 identified that financial development promotes economic growth. Eita and Jordaan (2007) found that in Botswana, the financial sector played a vital role in economic growth and development from 1977 to 2006. Further, Beck and Levine (2004) also concluded that the expansion of both banks and stock markets positively influenced economic growth based on the 40 countries from 1976-1998. From 1993 to 2013, Prochniak and Wasiak (2017) examined the impact of the financial sector on economic development in 28 EU and 34 OCED economies by employing banking indicators as explanatory factors, such as domestic credit, nonperforming loans, capital to assets ratio, and market capitalisation, and gross domestic product as a dependent variable. They established a considerable positive association between the banking sector and economic growth. Many empirical studies are consistent with this view, including Odhiambo (2008), Arestis et al. (2001); Xu (2000); and Levine et al. (2000).

Considering the studies which employed time series analysis, Kargbo and Adamu (2010) also found that financial development had a positive and statistically significant effect on economic growth between 1970 and 2008 in Sierra Leone. Owdeh (2012) evaluated the causality directional association between banking sector expansion and economic development in Lebanon from 1992 to 2011 using the granger causality test. He discovered a one-way causality that runs from economic growth to the banking sector. On the other hand, banking credit to the resident private sector and economic efficiency. Similarly, Al-Khatib and Al-Saffar (2013) examined the relationship between Jordan's financial development and economic growth between 2001 and 2012. They determined that the development of the

banking sector and economic growth have a strong demand-leading relationship. Jalil et al. (2010) use the autoregressive distributed lag method to investigate the relationship between the financial industry and economic growth in China. The findings of this study revealed a link between financial development and economic growth.

On the other hand, some economists, such as Bangake and Eggoh (2011) found bi-directional causality based on 71 developed and developing countries from 1960-2004. Ozturk (2008) analysed the relationship between financial development and economic growth in Turkey from 1975 to 2004. The empirical findings in the research reveal a two-way (bidirectional) causal relationship between financial development and economic growth. Hassan et al. (2011) investigated the association between financial development and growth in the middle- and low-income nations. The findings of their study show that the majority of the countries analysed had a causal association between financial development and growth. Wolde-Rufael (2009) and Hondroyiannis et al. (2005) also found similar results.

In contrast, some studies highlighted no causal or negative relationship between financial development and economic growth. The study done by Ibrahim (2007) found an insignificant relationship between the development of financial intermediaries and GDP in Malaysia from 1985 to 2003. According to the study findings done by Menyah et al. (2014) for 21 African nations, financial development and commercial liberalisation have no substantial impact on growth. Singh (1997); Narayan and Narayan (2013); Ayadi et al. (2015); Ductor and Grechyna (2015); Grassa and Gazdar (2014), and Mhadhbi (2014) also found a weak relationship between financial development and economic growth.

In the Sri Lankan context, some studies focused on the relationship between financial sector development and economic growth and found mixed results. For example, Perera

and Ichihashi (2016) concluded a unidirectional relationship between financial development to economic growth in Sri Lanka. By contrast, Perera and Paudel (2009) found that financial development does not boost economic growth. According to Rexiang and Rathanasiri (2011), financial intermediation impacts economic growth in the long run; however, the relationship is not strong in the Sri Lankan context. Based on the reviewed literature, one can conclude that the importance of the banking sector on economic growth showed mixed results, and it varies between countries and regions.

This research contributes in two distinctive ways to literature. First, in Sri Lanka, researchers have done a few empirical studies investigating the effect of banking sector development on economic growth. Second, using the autoregressive distributed lag (ARDL) approach, this study decomposes the relationship between into short-and long-run. Further findings of this study expect to provide valuable, helpful content in decision-making processes and policy implementation in the field of finance and economics.

III.   Methodology

Data Description

This analysis used annual data from the World Bank's Global Financial Development Database and World Development Indicators from 1960 to 2019. Both databases contain substantial datasets of financial system characteristics for 214 economies, with annual data beginning in 1960. The time period used in this study was determined by the availability of time series data for all of the variables in the model. To determine the effect on economic growth, investment in M3, population growth, and Export were used. For all the variables included in the analysis, Table 1 summarizes the variables.

Model Specification

In line with the theoretical and empirical arguments, the functional model below suggests exploring the role of banking industry development in elevating Sri Lankan economic growth by utilizing time-series data from 1960 to 2019.

The study employs Odedokun's model (Odedokun, 1996), which assumes the causation between financial development to economic growth. The model is based on the traditional neoclassical one-sector aggregate production model, in which financial development is input along with other real sector variables, as shown in the equation.

$$Y_t = f(L_t, k_t, F_t, Z_t) \qquad (1)$$

Where Y_t represents the real GDP, L represents Population (Labor), K represents the capital stock (Investment), F represents the level of financial sector development (Liquid Liabilities-M3), while Z is a vector of additional elements, such as the level of exports, that might be considered inputs in the aggregate production process, and t is an annual time series. The equation was estimated by Auto-Regressive Distributed Lag (ARDL) model. The following explanation represents the definitions of variables that were used in the model.

Table 1. Dependent and Independent Variables and Indicators

	Variable	Proxy
Dependent Variable	GDP	Economic growth as the annual growth rate of real GDP
Independent Variable	INVESTMENT	Investment/GDP ratio as gross nominal fixed capital/ nominal GDP
	M3	Financial Sector Development as the annual rate of real liabilities
	POP	Labor force growth proxied as annual population growth rate
	EXPORT	Real export growth as the annual growth rate of Export

Econometrics Methodology

The fundamental step of the empirical analysis is unit root testing, which employs augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests to investigate the stationarity of the variables under consideration. Identifying the integration sequence of the variables under consideration thus provides key information. This will be useful in examining the association between variables using proper econometric approaches.

This study employs the recently proposed autoregressive distributive lag (ARDL) approach developed and launched by Pesaran and Shin (1995 and 1999); Pesaran et al. (2001), and then refined by Nayaran and Smyth (2004) for the case of small sample size data (30-80 observations). Further ADRL technique is devoid of residual correlation; it is simple to derive the error correction model from a simple linear transformation by integrating short-run changes with long-run equilibrium without information loss. Furthermore, this model uses a sufficient number of lags to capture the data generation process in a dynamic framework of a general-to-specific modelling framework. Furthermore, ARDL may be used to generate the error correction term (ECT), which integrates short-run corrections with long-run equilibrium without sacrificing long-run information. A detailed specification of the model with respect to the variables of this study is presented below.

$$\Delta \ln RGPD_t =$$
$$\vartheta_0 + \sum_{i=1}^{n} \vartheta_i \ \Delta \ln RGPD_{t-i} +$$
$$\sum_{i=0}^{n} \vartheta_2 \ \Delta \ln Investment_{t-i} + \sum_{i=0}^{n} \vartheta_3 \ \Delta \ln M3_{t-i} +$$
$$\sum_{i=0}^{n} \vartheta_4 \ \Delta \ln Pop_{t-i} \ + \ \sum_{i=0}^{n} \vartheta_5 \ \Delta \ln Export_{t-i} + \ \varepsilon_t$$
(2)

where all variables are well-defined in the preceding section; and $\vartheta 1$, $\vartheta 2$, $\vartheta 3$, $\vartheta 4$ and $\vartheta 5$ are the long-term dynamic parameters to be estimated by the ARDL method.

Accordingly, the short-term parameters will be computed using the conditional error correction model (ECM). As a result, the error correction term (ECT t–1) will be computed using the following mechanism:

$$\Delta \ln RGPD_{t=} \beta_0 + \sum_{i=1}^{n} \beta_{1i} \ \Delta \ln RGPD_{t-i} +$$
$$\sum_{i=0}^{n} \beta_{2i} \ \Delta \ln Investment_{1t-i} + \sum_{i=0}^{n} \beta_{3i} \ \Delta \ln M3_{2t-i}$$
$$+ \sum_{i=0}^{n} \beta_{4i} \ \Delta \ln Pop_{3t-i} \ + \ \sum_{i=0}^{n} \beta_{5i} \ \Delta \ln Export_{4t-i} +$$
$$\lambda_1 \ ECT_{t-1} + \mu_{1t}$$
(3)

A negative and significant ECTt-1 coefficient (1) indicates that any short-term disequilibrium between the dependent and explanatory variables will revert to the long-run equilibrium connection.

Accordingly, the study formulated hypotheses that,

H_1: M3 does not Granger Cause GDP- If the results reject this null hypothesis, then it supports granger cause from M3 to Economic Growth

H₂: GDP does not Granger Cause M3- If the results reject this null hypothesis, then it supports granger cause from Economic Growth to M3

H₃: M3 is positively related to the GDP growth

For the Diagnostic and Stability of the model, the Jarque- Bera test was used. In addition, the problem of Heteroskedesticity in the residuals of the estimated model was tested by Breusch- Pagan- Godfrey Test. And the problem of serial correlation was tested by the Breush-Godfrey LM test. Finally, the Ramsey RESET test was utilized to test the problem of model misspecification.

IV.   Results and Discussion

As shown in the table 2, all values of Jarque-Bera are statistically significant at 1 % level following the normal distribution of variables.

Table 2. Descriptive Statistics

	GDP	INVESTMENT	M3	POP	EXPORT
Mean	4.572	6.924	4.267	3.560	3.729
Medium	4.814	5.406	5.262	2.484	4.263
Maximum	9.145	54.906	7.463	2.405	2.384
Minimum	-3.569	-17.471	-4.122	0.506	0.342
Std. deviation	2.251	11.682	3.071	1.532	6.677
Skewness	-0.998	1.505	-0.248	1.147	-0.397
Kurtosis	5.207	7.093	3.138	2.339	3.801
Jarque-Bera	22.509	65.628	20.328	16.328	18.230
Probability	0.000	0.000	0.000	0.000	0.000
Sum	278.893	422.370	325.185	178.328	227.441
Sum.Sqd.De.	303.909	8187.626	670.975	203.975	2674.876

Econometric Analysis

Unit Root Test

According to table 3, the tests of ADF and PP tests, the variables GDP, Investment and Export are stationary at the level while Liquidity Liabilities and Population are stationary at the first difference level. The results indicated that all variables are stationary at the first difference level.

Table 3. Unit Root Test

	At Level (P values)		At 1ˢᵗ Difference (P value)	
	ADF	PP	ADF	PP
GDP	0.0000	0.0000	0.0000	0.0001
EXPORT	0.0122	0.0000	0.0287	0.0001
INVESTMENT	0.0008	0.0000	0.0000	0.0001
M3	0.7734	0.6988	0.0000	0.0000
POP	0.8145	0.8145	0.0000	0.0000

Bound Test – Long Term Relationship

The F-Statistics of the bound test is 6.865421, and it exceeds the upper bound of the critical value (3.09). Thus the results reveal a long-term relationship between variables. Table 4 shows the estimated coefficients of the long-term ARDL model.

Table 4. Bound Test

	Coefficients	P value
EXPORT	-0.154228	0.0321
INVESTMENT	0.0128	0.0572
M3	2.6427	0.0325
POP	0.0623	0.5538
C	6.0732	0.0274

According to the results obtained, the coefficient of liquidity liabilities is recorded as positive and significant at a 5 percent level of significance. This value indicates a positive relationship between banking sector development and the economic growth in Sri Lanka in the long term. Hence the hypothesis developed in the study can be accepted as there is a positive relationship between banking sector development and economic growth. This result is consistent with the findings of Odhiambo (2008), Arestis et al. (2001), Xu (2000), Levine et al. (2000) and Kargbo and Adamu (2010). The relationship between export and economic growth shows a negative and significant relationship in the long run. However, the investment and population growth represent a positive relationship to the economic growth but are not significant at 5 percent level of significance.

Error Correction Model- Short Term Relationship

The estimation of the Error Correction Model in the short-term relationship is shown in table 6. The outcomes show a positive and significant relationship between banking sector development and GDP growth in the short run, with a value of 23.68447 percent. This value indicates a positive short-run relationship between banking sector development and the economic growth in Sri Lanka. Therefore, the hypothesis developed in the model that there is a positive relationship between banking sector development and GDP growth can be accepted in the short run in the Sri Lankan context.

Considering the estimated coefficients, Export shows a significant negative relationship to the economic growth in the short term. At the same time, investment is positively related to economic growth but is not significant in the Sri Lankan context in the short term. Population growth also shows a positive relationship to economic growth but is not significant at a 5 percent level of significance in the short run. However, the overall model is fitted better, indicating a 45 percent R squared value, as well as F statistics, also 6.86 concluding a high level of significance supporting the fitness of the model. Moreover, the Durbin Watson statistics is around 2.0, equal to the rule of thumb of 2, indicating zero autocorrelation in the model.

Table 5. Error Correction Model

	Coefficients	P value
EXPORT	-0.1012	0.0001
INVESTMENT	0.01225	0.5502
M3	23.68447	0.0325
POP	0.0409	0.4328
C	3.9857	0.0904
Durbin-Watson Value	2.0	
R squared	0.45	
F Statistics	6.86	

Causality Test

The results of the Granger Causality test are represented in Table 6. According to the main results, it was found that the banking sector's development granger caused the GDP, indicating a unilateral relationship. Furthermore, it does not granger cause the GDP to the M3 indicating that GDP is not the granger caused to the banking sector development. Therefore, this result supports rejecting the null hypothesis that M3 does not granger cause GDP can be rejected and accepting that M3 granger cause GDP. Another null hypothesis that GDP does not granger cause M3 could be accepted, indicating that GDP is not granger cause of banking sector development.

Table 6. Granger Causality Test

Null Hypothesis:	F-Statistic	Prob.
EXPORT does not Granger Cause GDP	0.10524	0.9801
GDP does not Granger Cause EXPORT	3.51256	0.0136
INVESTMENT does not Granger Cause GDP	0.26147	0.9012
GDP does not Granger Cause INVESTMENT	5.76597	0.0007
M3 does not Granger Cause GDP	0.96765	0.0339
GDP does not Granger Cause M3	0.17784	0.9488
POP does not Granger Cause GDP	0.40553	0.8037
GDP does not Granger Cause POP	0.68101	0.6085
INVESTMENT does not Granger Cause EXPORT	1.28897	0.2876
EXPORT does not Granger Cause INVESTMENT	1.26405	0.2971
M3 does not Granger Cause EXPORT.	1.51517	0.2127
EXPORT does not Granger Cause M3	0.69284	0.6006
POP does not Granger Cause EXPORT	0.56314	0.6905
EXPORT does not Granger Cause POP	0.04816	0.9955
M3 does not Granger Cause INVESTMENT.	2.23898	0.0787
INVESTMENT does not Granger Cause M3	0.76088	0.5559
POP does not Granger Cause INVESTMENT	0.32632	0.8589
INVESTMENT does not Granger Cause POP	0.80655	0.5271
POP does not Granger Cause M3	1.67196	0.1719
M3 does not Granger Cause POP	0.16027	0.9574

Diagnostic and Stability Tests

Table 7 shows the most important diagnostic tests pertaining to having model estimation in time series. As shown in the table, The Jarque-Bera value indicates a normal distribution of the model residuals. To test the serial correlation, the Breush-Godfrey LM test was used. According to the test result, it can be concluded that there is no serial correlation in the residuals estimated. The Breaush-Pagan Godfrey test tested the Problem of Heteroskedesticity, and it revealed the not having problem of Heteroskedesticity in the estimated residuals. Finally, the Ramsey RESET test was used to ensure the model specification of the study. The results indicated that the estimated model is well specified.

Table 7. Diagnostic Tests

Test	Normality (JB-Test)	Serial correlation (Breush-Godfrey LM)	Heteroskedasticity (Breush Pagan Godfrey)	Ramsey Reset
F-Statistics	4.860991	0.1481	0.6422	3.7334
Probability	0.8799	0.9470	0.7189	0.1102

Furthermore, the study employed the Cumulative Sum (CUSUM) and Cumulative Sum of Square (CUSUMSQ) charts to ensure estimated parameters' long-run relationship stability. According to the figures below, the CUSUM and CUSUM Square plots lie within the critical lower and upper bounds at a 5 percent significance level. Accordingly, it can be stated that the chosen model is statistically stable, and all the parameters are consistent.

Figure 2. (a) Cumulative Sum (CUSUM); (b) Cumulative Sum of Squares (CUSUMSQ)
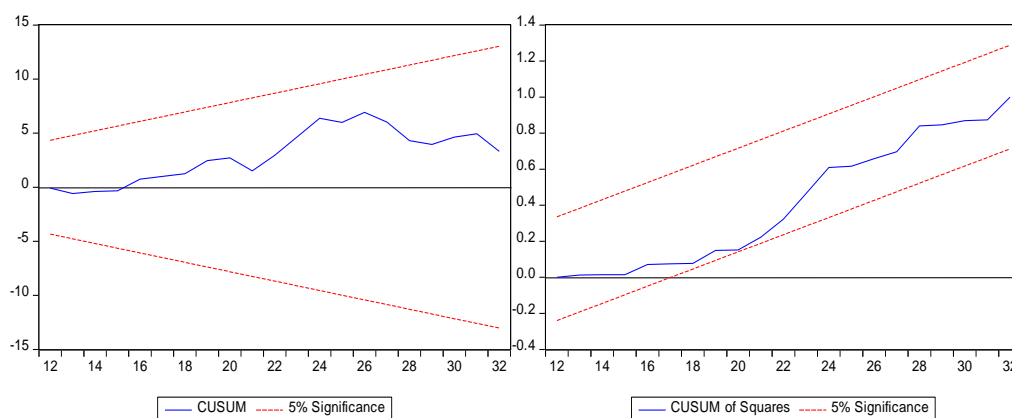
V. Conclusion

This study aimed to investigate whether banking sector development improved economic growth in Sri Lanka between 1960 and 2019. For this purpose, the study implemented one of the most acceptable financial time series econometric methodologies, namely, bounds testing within the ARDL framework.

The study found a positive relationship between banking sector development and economic growth in the long term. From an economic perspective, this result provides significant support for the supply-leading hypothesis, which asserts that banking development is one of the main elements that determine economic growth. Thus, the empirical outcomes indicate that Sri Lanka's economic growth is elastic to changes in banking industry development. In contrast, the relationship between exports and economic growth shows a negative and significant relationship in the long run. However, the investment and population growth represent a positive relationship to the economic growth but are not significant. Estimation of the Error Correction Model in the short-term relationship shows a positive and significant relationship between banking sector development and GDP growth in the short run. Considering the estimated coefficients, export shows a significant negative relationship to the economic growth in the short term. In contrast, Investment and Population growth are positively related to economic growth but are not significant in the Sri Lankan context in the short term. Among the major results of the causality analysis, it found a unique direction of causal effect passing from banking industry development to economic growth. This conclusion, like the actual results of the level of long-term model, confirms the theoretical

justifications of the supply-leading hypothesis. Economically, one might argue that banking expansion is a necessary and vital component of Sri Lanka's accelerated economic growth. As a result, the banking sector's intermediary position as a fund facilitator increases economic growth. Finally, the current study's empirical data may have substantial policy consequences for policymakers and bankers. They should strive hard to preserve a stable regulatory environment that strengthens the financial system's role in fostering economic growth.

It would be interesting for future research to extend by exploring the link between financial sector openness – financial sector competition–Financial sector efficiency - economic growth.

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