

Financial Liberalisation and Economic Growth In Nigeria: An Empirical Analysis

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Abstract : *The purpose of this study is to empirically examine the financial liberalization experience in Nigeria. In particular, the study analyses the motivation for implementing a financial liberalization policy; providing an explanation of the evolution and process of the financial liberalization. This study establishes the long-run and short-run relationship between financial liberalization and real output using the ARDL framework with annual observations over the period 1981-2012. The study uses three measures as proxies to indicate the degree of financial liberalization: KAOPEN-a financial openness index; money supply as a ratio of GDP, M2; and credit to the private sector as a ratio of GDP, CPS. The results obtained suggest that there is a positive long-run equilibrium relationship between financial liberalization and economic growth. This supports the view that financial liberalization plays a crucial role in the process of economic development; the financial liberalization process in Nigeria has stimulated financial development leading to significant contribution to economic growth. Therefore, since financial development seems important to economic growth, measures should be taken to reduce government inefficiencies in order to release resources for the development of financial institutions*

Keywords - *Financial Liberalization, equilibrium relationship, regression, Nigeria*

I. Introduction

Historically, the financial systems of majority of developing countries were characterized by little institutional diversity and little availability of alternative financial instruments and assets. There was also a strong relationship between governments and banks with the banks often financing government expenditures. Additionally, the economies of many of these countries were marked with low savings rates and poor access of businesses to credit, which contributed to impede significant economic development. Thus, beginning from the early 1980s many of these countries started pursuing a strategy of financial liberalization with the aim of achieving better macroeconomic performances and higher economic growth through the channel of financial system deepening and development.

It was presumed that the development of the financial system aids overall economic development, hence, the removal of all forms of restrictions on the financial sector has clear policy implications such as increasing savings, investment and growth. In addition, such strategy will deepen the integration of the financial sector as well as other sectors (Shaw, 1973), raise allocative efficiency and improve government policy. According to McKinnon (1973), financial liberalization is the “only game in town”.

Despite these gains advanced by theory, however, the financial liberalization process in many developing countries has rarely played out in reality, thereby, evoking an intense and increasing debate amongst economists and researchers. For example, the liberalization experiences of South Korea, Japan and Taiwan were largely successful, resulting in high growth rates (Gibson and Tsakalotos, 1994). By contrast, the financial liberalization strategy did not play out well in Latin American countries, particularly Chile, Argentina, Bolivia and Uruguay (Diaz-Alejandro 1985; Moretti, 1992). In the second group of countries, financial reforms, regrettably, led to heavy financial distress and near collapse of financial intermediation. Similarly, the experience of Turkey which initiated financial reforms in the 1980s was that of poor growth and financial crisis (see Capoglu, 1990). In the same vein, the impact of financial liberalization in many African countries has been adjudged to be negative accompanied with excessive macroeconomic instability accentuated by high interest rates, high inflation rates and sharp exchange rate depreciation (see Pill and Pradhan, 1997).

This study focuses on the experience of Nigeria with the financial liberalization process. The strategy was initiated as part of a broader framework of economic measures introduced to strengthen the economy and position it towards accelerated economic growth. The liberalization package consisted of a series of measures targeted at achieving economic growth and stability. It included the removal of ceilings on interest rate, abolition of credit rationing, exchange rate deregulation and lifting of constraints and granting of licence to new banks *inter alia*.

The financial liberalization process in Nigeria progressed gradually in a phase-like manner with different policy measures implemented in different years. The liberalization of the financial sector in Nigeria commenced in 1986 with the easing of entry barriers in the financial system with the view to increase efficiency

and competition among banks. Until 1986, there were 29 deposit money banks (DMB's)¹ and 12 merchant banks most of which were government-owned. The government had a substantial share in the country's leading DMB's and merchant banks as well as about 47% share in 14 insurance companies. In total, 80% of assets in the commercial banks and 45% of assets in the merchant banks were under the control of the government (NDIC 1993, cited in Lewis and Stein, 1997, pp. 7).

With the relaxation of entry barriers, however, the number of financial institutions increased to 619 DMB's, 490 merchant banks, 30 development banks, 10,634 specialized banks and 5,217 specialized financial institutions in the 1990s. By the end of the 1990s the total number of financial institutions increased to 16,990 and by the 2000s this number decreased to 11,603 following the merging and acquisition of some of the financial institutions which began in 2004.

There was also a change in the composition of ownership along with the increase in number of financial institutions. During 1986-1992, foreign partnership was limited to only four of the banks while the rest were under the control of the local private sector (Brownbridge and Harvey, 1998). However, many of these institutions eventually collapsed and the CBN in 1991 suspended issuing of new licences owing to signs of distress in the industry (*ibid*, pp. 113).

The liberalization of interest rate both on lending and deposits began in 1987 with the aim of allowing market-based interest rates to be charged by banks so as to guarantee the efficient allocation of resources (Ikhide and Alawode, 2002). However, new interest rate controls were introduced in 1989 and more regulation imposed in 1991 following high levels of interest rates. The CBN imposed a ceiling of 21% and 13% on lending and deposit rates respectively. Removal of controls on interest rate was again introduced in 1992 with more partial liberalization in 1993 while in 1994 interest rates were subjected to ceilings resulting in negative real interest rates and by 1996 there was complete deregulation of interest rates. By liberalizing the interest rate, the CBN aimed to allow the market decide the true cost of capital based on the forces of demand and supply, keep real lending and deposit rates positive, thereby, spurring savings and evolving a competitive environment that would be beneficial to both depositors and borrowers.

Also, the government allowed the establishment of Bureaux De Change (BDC). Private agents were allowed to operate the BDC so as to help alleviate the demand pressure for foreign exchange. They were informal in operation and were to make foreign exchange accessible to small dealers. In addition, banks were permitted to acquire stocks in non-financial enterprises, thus increasing the range of their assets and liabilities. The objective was to create competition among financial institutions (Ikhide and Alawode, 2002).

Furthermore, the Nigerian Deposit Insurance Corporation (NDIC) was established in 1988 and was given the mandate of insuring bank deposits. This was aimed at stimulating public confidence in the banking system as it was becoming clear that most of the banks were becoming distressed. Thus, it was a move towards protecting the interests of depositors while also aiming at achieving and maintaining financial stability.

Despite the implementation of these measures, financial instability still prevailed and this incited the need to implement other radical reforms. The Banking and Other Financial Institutions Decree (BOFID) of 1991 was promulgated to replace the 1969 Decree with the aim of further strengthening the banking regulation and increasing the autonomy of the CBN along with the monetary authority and supervisory role of the CBN. Subsequently, the CBN enacted prudential guidelines to enhance the quality of risk assets of the banks and the soundness of their operations. Under these guidelines, banks were required to make provisions for non-performing loans and to stop charging interest on these loans so as to present an accurate reflection of their true balance sheet position. Also, a uniform accounting standard for banks was imposed to ensure accuracy and reliability of their financial statements (Ikhide and Alawode, 2002).

Further, in an attempt to provide a level playing field for all banks operating in Nigeria, the CBN introduced the universal banking policy in 2001. Thus, the classification of banks by the nature of their business was repealed and the boundary between retail and wholesale banking was removed thereby creating competition among the banks. Furthermore, the consolidation of banks operating in Nigeria was embarked upon by the CBN in 2005 with the aim of further strengthening the banks. The policy required banks to raise their shareholders funds to a minimum of 25 billion naira (local currency)². Consequently, the number of banks was reduced from 89 to 25 through mergers and acquisition of existing banks.

The foregoing brief historical information implies that the financial sector of Nigeria has undergone several reforms as a result of the quest to reposition the sector. This is premised on the view that the financial sector plays an important role in the economy. Thus, this paper is a contribution to the finance-growth literature by focusing on the Nigerian financial liberalization process and its role in the economy.

¹ Deposit money banks consist of commercial banks and other banks/institutions that accept transfer deposits, such as demand deposits.

² see Iganiga 2010 for details of the reform programme.

The remainder of the paper is structured as follows. Section 2 presents a review of the extant literature and mentions some related studies on Nigeria. Section 3 outlines the model and data used in the study. Then, in section 4 the empirical results are discussed. Finally, the study concludes in section 5.

II. Literature Review

In many developing countries, governments impose extensive restrictions on the operations of banks. These restrictions can take a number of forms such as interest rate ceilings which are low (and in real terms, sometimes negative), liquidity requirements which effectively force the banks to fund government activities on favorable terms, reserve requirements which force banks to hold reserves at the central bank at low or even zero rates, and active intervention favoring particular sectors or firms inter alia. These restrictions reduce the profitability of banking activities and can be thought of as a ‘tax’ on banks. The ‘tax’ can be effectively a major source of government revenues replacing other forms of revenue. Collectively, these restrictions imposed by the government have been termed financial repression, a word coined by McKinnon (1973) and Shaw (1973).

According to McKinnon and Shaw, financial repression explains the key features of developing countries' financial structure; flow of funds through the organized sector (banks) is reduced and informal curb markets, which are not subject to control, grow at the expense of the formal system. Furthermore, financial repression is viewed as a central part of the failure of developing countries to grow more vigorously; both saving and investment are reduced and the investment that does take place is not the highest return (see Sen and Vaidya, 1997). Similarly, Stiglitz and Weiss (1989) indicate that financial repression reduces the screening and monitoring functions of financial institutions. Moreover, agents are forced into activities, for example, holding more extensive stocks of money than they need for lack of access or confidence in the banks.

As mentioned above, the key measure of financial liberalization is the removal of restrictions on interest rate. This will in turn increase savings as savings is assumed to be responsive to interest rates and the higher savings rates will finance a higher level of investment (Shrestha, 2005). This view is supported by Reinhart and Tokatlidis (2001) when they opined that financial liberalization should be expected to lead to higher saving rate as well as higher levels of and more profitable investment. Higher real interest rates tend to attract more savings from households to bank deposits and this makes more loanable funds available for investment. The interest rate represents the price of borrowed money or the opportunity cost of lending money for a given period of time. During this period, the real value of financial assets can be reduced by inflation and lenders want to be compensated for an expected reduction in the purchasing power of these assets. The real interest rate is thus the rate adjusted with a due compensation for the anticipated inflation (see Bascom 1994, pp. 10; Shrestha 2005, pp. 29).

Several channels through which financial liberalization can lead to economic growth have been highlighted in the literature. For example, the cost of capital is substantially reduced as foreign investors, maximizing the gains of diversification that comes with financial liberalization, drive up domestic equity prices. This is supported by the argument of Bekaert and Harvey (2000) and Henry (2000) who indicate that the cost of capital reduces after major regulatory reforms. A reduction in the cost of capital increases investment, and if the increased investment is efficient, it will foster economic growth. Similarly, Galindo et. al. (2002) find that financial liberalization reduces the cost of capital which in turn enhances the growth rates of economic sectors that for technological reasons depend heavily on foreign finance. However, they conclude that this result is subject to the quality of institutions supporting credit markets.

In a similar argument, Lucas (1990) posit that integration enables capital flows from rich economies to poor economies since the latter has relatively lower capital-labour ratios which should generate higher returns to capital. This increased capital inflow contributes positively to equity prices. In addition, increased access to foreign capital as a result of capital flows should complement limited domestic saving in poor countries and addresses the constraint on investment. This will in turn enhance growth in poor countries and also allow residents of richer countries to get higher returns on their savings invested abroad (Prasad and Rajan, 2008). In this way, an excess of saving over investment in one country finds an outlet in another, leading to efficient allocation of scarce capital (see Obstfeld 1994; Acemoglu and Ziliboti 1997; Klein and Olivei 1999; Levine 2001; Bonfiglioli 2008). However, following the spate of recent financial crises, some researchers argue that the gains of financial liberalization have been undermined because capital inflows have been wasted on inappropriate consumption and unproductive investment.

At an empirical level, the evidence on the relationship between financial liberalization and economic growth is mixed. For example, Bekaert and Harvey (1999) using regression of average annual per capita GDP growth on a number of variables observe that the financial liberalization indicator displays a consistently positive and statistically significant coefficient. In fact, they show that financial liberalization leads to an increase in per capita GDP growth of anywhere from 1.5% to as large as 2.3% per year. Similarly, Fowowe (2008) finds significant positive relationship between financial liberalization and economic growth. Using a

panel data of 19 Sub-Saharan African countries with two indexes to measure financial liberalization, he concludes that the relationship is positive. This is consistent with the findings of Lensink and Hermes (2008) that use a dataset for measuring financial liberalization for a sample of 25 developing countries over the period 1973-1996. Their result suggests a positive relationship between financial liberalization and economic growth measured by per capita GDP growth. Also, Quinn (1997) uses data over the period 1960-1989 for 66 countries and finds a statistically significant positive relationship between his financial liberalization indicator and growth.

In contrast, a number of other studies have found little or no evidence supporting the link between financial liberalization and economic growth. For example, Rodrik (1998) uses data for about 100 countries for 1975-1989 to analyze the relationship between financial liberalization and economic growth. He regresses the growth rate of GDP per capital on a binary indicator of financial openness constructed by the IMF, controlling for determinants drawn largely from the empirical literature on economic growth. His result suggests no association between financial openness and growth and questions whether capital flows spur economic growth. In addition, mixed findings on the relationship between financial liberalization and economic growth have been reported by other studies such as Kraay (1998), Klein and Olivei (1999), Reisen and Soto (2001) and, Khalid (2004).

The liberalization of the Nigerian financial sector has generated a number of theoretical and empirical studies focusing on the impact of financial sector reforms (see Ikhida and Alawode, 2002; Akpan, 2004; Orok-Duke et. al., 2009; Nzotta and Okereke, 2009; Okpara, 2010; Nwadiubu et. al., 2014). However, majority of these studies employ descriptive statistical analysis while a few that analyze data empirically use only a single measure of financial liberalization. Consequently, the results may be sensitive to the financial indicator used. To achieve a more robust result, we would examine Nigeria's experience with financial liberalization using three different measures of financial liberalization in a time series framework.

III. Model And Data

In order to analyze the relationship between financial liberalization and economic growth, the following model is specified:

$$RGDP_t = \lambda_0 + \lambda_1 FL_t + \lambda_2 INV_t + \lambda_3 GOVEX_t + \lambda_4 OPEN_t + \lambda_5 DEBT_t + \varepsilon_t \quad (1)$$

Where,

RGDP = Real GDP in Naira

FL = a measure of Financial Liberalization

INV = investment measured by gross fixed capital formation (% of GDP)

GOVEX = government expenditure (% of GDP)

OPEN = Exports and imports of goods and services (% of GDP)

DEBT = external debt stock (% of GDP)

ε_t is the white noise with mean 0 and variance σ^2 and is assumed to be normally distributed, λ_0 to λ_5 are the coefficients of the respective variables and t is time. All variables are in logarithmic form.

Our interest is to estimate the above model from short-run and long-run perspectives. Consequently, we specify the following unrestricted error correction model (UECM) in an ARDL framework in line with Pesaran and Shin (1998) and Pesaran et al (2001)

$$\begin{aligned} \Delta RGDP_t = & \beta_0 + \sum_{i=1}^p \omega_i \Delta RGDP_{t-i} + \sum_{j=0}^p \psi_j \Delta FL_{t-i} + \sum_{k=0}^p \xi_k \Delta INV_{t-i} + \sum_{l=0}^p \pi_l \Delta GOVEX_{t-i} + \\ & \sum_{m=0}^p \varpi_m \Delta OPEN_{t-i} + \sum_{q=0}^p \phi_q \Delta DEBT_{t-i} + \delta_1 RGDP_{t-1} + \delta_2 FL_{t-1} + \delta_3 INV_{t-1} + \\ & \delta_4 GOVEX_{t-1} + \delta_5 OPEN_{t-1} + \delta_6 DEBT_{t-1} + v_t \end{aligned} \quad (2)$$

The dependent variable is real gross domestic product, RGDP which is used to measure economic growth and it is determined by the right hand side variables which are largely drawn from the literature on financial liberalization and economic growth. The focal financial liberalization measure used in this study is the Chin-Ito financial openness index, KAOPEN³, which measures a country's degree of capital openness. In addition, for robustness checks two other measures of financial liberalization are used: money supply (M2) as a ratio of GDP and credit to the private sector (CPS) as a ratio of GDP. However, the financial liberalization indicator has an

³ See Chinn and Ito (2008) for information on how the index is constructed

ambiguous a priori sign based on different debates on financial liberalization and economic growth literature highlighted in previous sections.

In line with economic theory, the relationship between factor accumulation (investment) and economic growth is expected to be positive. For government expenditure as a ratio of GDP, the relationship with economic growth is ambiguous a priori; the direction of the relationship largely depends on whether government expenditure crowds in or crowds out investment. On the one hand, government expenditure can erode the efficient allocation of resources or crowd out resources that are available for more efficient and profitable sectors of the economy, consequently resulting in a negative impact on growth. However, if the government decides to focus its expenditure on nonrivalrous and nonexcludable public services, investment will be enhanced thereby fostering economic growth. Trade openness (OPEN) is included as a policy-related variable while external debt captures the macroeconomic condition of the country.

In order to analyze the effect of financial liberalization on economic growth, it is imperative to examine it over a long time period. Thus the current study uses annual time series data which covers a period of 32 years from 1981 to 2012. The data used in this study are obtained from different sources, including various publications of the Central Bank of Nigeria (CBN) statistical bulletins and annual reports, National Bureau of Statistics (NBS), World Bank World Development Indicator (WDI) database, and IMF International Financial Statistics (IFS) database.

IV. Empirical Results

Unit Root Test

As a preliminary step before the estimation of the ARDL model, we conduct the test of stationarity of the variables using the Augmented Dickey-Fuller (ADF) and the Phillips-Perron (PP) tests. The results of the ADF and PP tests with trend and intercept are presented in Table 1. The results of the unit root tests indicate that all the variables, except investment (INV), are integrated of order one i.e. I(1), which implies they are non-stationary in level but become stationary after first differencing. Investment is found to be stationary in level indicating that it is an I(0) variable. Importantly, this conclusion is robust to the choice of test. Therefore, we can conclude that our variables satisfy a basic requirement for the analysis used in this study⁴.

Table 1: ADF and PP Unit Root Tests

VARIABLE	ADF		PP	
	LEVEL	1 st DIFF.	LEVEL	1 st DIFF.
RGDP	-1.642	-4.880***	-1.631	-4.845***
KAOPEN	-2.113	-5.046***	-2.253	-5.046***
M2	-2.458	-4.849***	-2.171	-5.033***
CPS	-2.159	-5.511***	-2.029	-8.146***
INV	-3.775**	-	-3.596**	-
GOVEX	-2.799	-6.990***	-2.884	-10.465***
OPEN	-1.128	-5.493***	-2.577	-7.804***
DEBT	-1.867	-4.504***	-1.899	-4.493***

Note: *** and ** denote significant at 1% and 5% significance levels respectively.

ARDL Bounds Cointegration Test and Level Relationship

The first step in the ARDL estimation approach is to test the joint significance of the lagged level by computing the F-statistic which has a non-standard distribution irrespective of whether the variables are I(0) or I(1). Specifically, this involves a test of the null hypothesis of no cointegration against the alternative of the existence of a long-run relationship among the variables. Notationally, this can be expressed as:

$$H_0: \delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = \delta_6 = 0$$

The results of the F-statistic are reported in table 2. The results show that we reject the null of no cointegration amongst the variables at the 5% significance level for regressions 1 and 3, and at the 10% level for regression 2. Thus, we conclude that there is a long run relation between the variables used in all the regressions.

TABLE 2: F-test for the Existence of a Long Run Relationship among Variables

Regression	BG-LM	F-Statistic	Cointegrated
1	2.076[0.354]	4.479** (4.443)	Yes
2	3.185[0.204]	3.848*(3.763)	Yes
3	5.800*[0.056]	5.900**(4.443)	Yes

Note: * and ** denote significance at 10% and 5% levels respectively. Numbers in parentheses are the relevant critical value bounds obtained from Narayan (2005) while numbers in squared brackets are the p-values.

⁴ The ARDL approach requires variables to be I(0) or I(1) but not I(2)

Table 3 provides the normalized long-run level relationship obtained from the ARDL procedure using all three measures of financial liberalization. Clearly, our results provide reasonable signs for the coefficients for all variables from a theoretical standpoint. Regression (1) indicates that the financial liberalization index, KAOPEN, is positive and has a statistically significant (at the 1% level) effect on real GDP. This implies that there is a significant long run effect of financial liberalization on economic growth. In particular, a 1% change in KAOPEN leads to about 0.143% increase in real GDP, after controlling for the other variables. This result corroborates that of King and Levine (1993), namely, that the financial system enhances economic growth. Similarly, Ogwumike and Salisu (2012) found a positive long-run relationship between financial development and economic growth in Nigeria. Investment has the expected positive sign and is significantly related to Nigeria’s economic growth. Similarly, government expenditure exerts a negative and significant impact on economic growth. This is consistent with the neoclassical argument that increased government size tend to crowd out private investment, thereby impeding growth. The coefficient on OPEN is negative indicating that trade openness exerts a negative impact on economic growth. A plausible explanation for this is when the export of a country does not generate sufficient income to support its import. External debt exerts a negative and statistically significant effect on economic growth. Debt burdens use up a substantial fraction of resources that could be marshaled to enhance investment.

TABLE 3: Estimated Long Run Coefficients of the ARDL Model

Dependent Variable: RGDP			
REGRESSOR	(1)	(2)	(3)
CONSTANT	29.700*** (26.726)	28.228*** (13.827)	28.549*** (11.816)
KAOPEN	0.143*** (3.079)		
M2		0.206 (0.985)	
CPS			0.083(0.364)
INV	0.320*** (11.179)	0.334*** (4.242)	0.355*** (3.037)
GOVEX	-0.131** (-2.682)	-0.165 (-1.381)	-0.178(-1.223)
OPEN	-0.415*** (-3.550)	-0.568* (-1.922)	-0.636* (-1.693)
DEBT	-0.098***(-3.510)	-0.036(-0.614)	-0.035(-0.482)
Adjusted-R ²	0.987	0.983	0.982
F-statistic	393.291***[0.000]	288.572***[0.00]	279.118***[0.00]
BG-LM	3.376[0.185]	5.960*[0.051]	5.832*[0.054]
RESET	0.140[0.712]	0.129[0.722]	0.001[0.970]
JB	2.585[0.275]	3.949[0.139]	4.268[0.118]
ARCH-LM	0.023[0.878]	0.005[0.946]	0.023[0.880]

Note: *, ** *** denote significance at 10%, 5% and 1% levels respectively. Numbers in parentheses are the t-statistic while numbers in brackets are p-values.

In regressions (2) and (3), we use M2 and CPS respectively to capture financial liberalization. The results obtained are similar to those from regression (1). Theoretically, the signs of the variables are plausible. However, the coefficients of M2 and CPS turn out to be insignificant. It is worth noting that all the models meet the expectation of the diagnostic tests⁵ at the 5% significance level and have satisfactory goodness-of-fit. As reflected by the adjusted-R², the results show that the explanatory variables accounts for about 98% of the variation in real GDP. The CUSUM and CUSUMSQ plots for the three regressions are presented in the appendix and indicate that our model is adequately specified and structurally stable.

4.3 Error Correction Model

The estimated error correction model (ECM) of the selected ARDL model is presented in Table 3. The ECM shows the speed of adjustment to remove disequilibrium in the model following a disturbance. Our empirical results prove to be satisfactory in terms of the statistical fit of the model as evidenced by adjusted-R² and F-statistic of the joint test of the overall significance of all explanatory variables. In addition, the diagnostic tests affirm the statistical adequacy of our model. A striking feature of our result is the insignificance of the coefficient of all three measures of financial liberalization. Thus, although KAOPEN has significant long-run effect on real GDP, the dynamics of the ECM suggests that its effect in the short-run is insignificant. On the other hand, we find in regression (1') that investment, trade openness and external debt have short-run effects on real GDP, in addition to their long-run effects.

⁵ The diagnostic tests is based on the Lagrange Multiplier test of residual serial correlation, Ramsey’s Reset test using the square of the fitted values for functional form, test of skewness and kurtosis of residuals for normality test, and regression of squared residuals on squared fitted values for heteroscedaticity test.

Further, the one-lagged error-correction term (ECT) is negative and statistically significant in all the models as expected, establishing the existence of an equilibrium relationship among the variables. In particular, the coefficient of the one-lagged ECT is -0.412 which indicates that about 41% of the deviation from the long-run will be corrected in each time period. Phrased differently, any short-run deviation will take about 2.4 years to adjust to long-run equilibrium.

TABLE 4: Short-Run Dynamic ECT Model

Dependent Variable: ΔRGDP			
Regressor	(1')	(2')	(3')
CONSTANT	-0.007(-0.462)	0.001(0.028)	0.004(0.223)
ΔRGDP(-1)	0.216*(1.725)	0.124(0.812)	0.127(0.821)
ΔKAOPEN	0.038(1.624)		
ΔM2		0.013(0.243)	
ΔCPS			-0.005(-0.119)
ΔINV	0.106**(0.016)	0.068(1.383)	0.073(1.474)
ΔGOVEX	0.002(0.160)	0.010(0.702)	0.012(0.817)
ΔOPEN	-0.161***(-4.157)	-0.126**(-2.790)	-0.131***(-2.829)
ΔDEBT	-0.049** (-2.369)	-0.018(-0.773)	-0.016(-0.691)
ECT(-1)	-0.412***(-4.666)	-0.178**(-2.726)	-0.154**(-2.601)
Adjusted-R ²	0.586	0.537	0.526
F-statistic	6.874***[0.000]	3.650***[0.009]	3.494**[0.011]
BG-LM	3.173[0.205]	7.404*[0.059]	8.088*[0.088]
RESET	1.757[0.199]	1.155[0.295]	1.081[0.310]
JB	4.096[0.129]	2.702[0.259]	3.207[0.201]
ARCH-LM	0.018[0.895]	0.570[0.450]	0.502[0.479]

Note: *, **, *** denote significance at 10%, 5% and 1% levels respectively. Numbers in parentheses are the t-statistic while numbers in brackets are p-values.

V. Conclusion

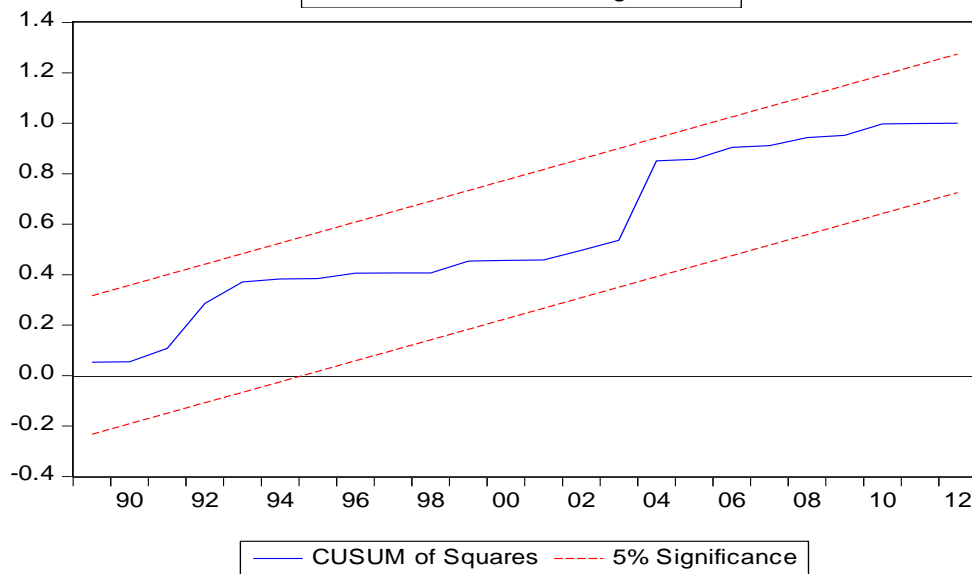
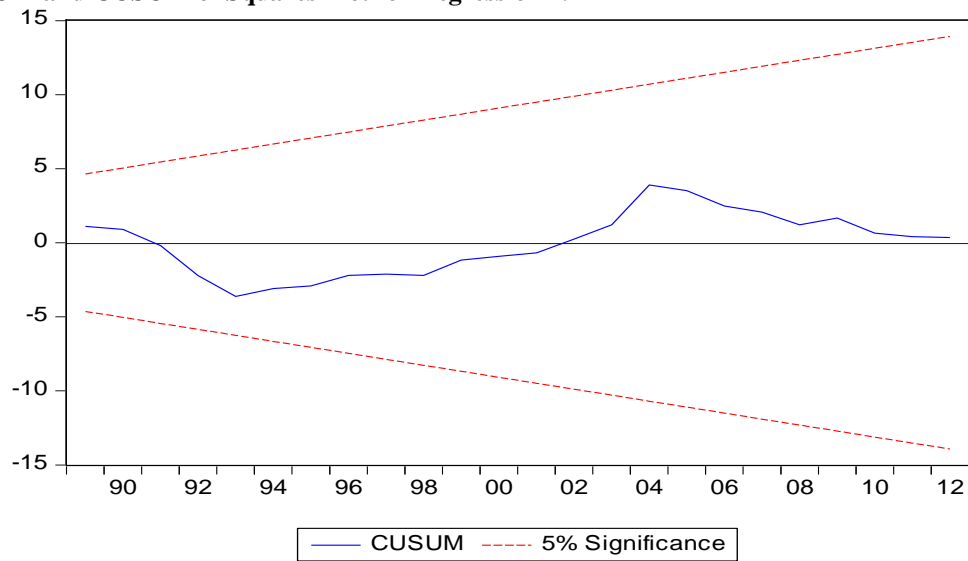
The empirical analysis of this study employs the Autoregressive Distributed Lag (ARDL) estimation approach to examine the long-run and short-run relationship between the measures of financial liberalization and economic growth in Nigeria. We find a significant and positive relationship between economic growth and financial liberalization. The empirical examination further shows that financial liberalization enhances economic growth in Nigeria only in the long-run and has no significant effect in the short-run. In order to consolidate the gains of financial liberalization in Nigeria, there is a need to stabilize the performance of the financial system in Nigeria through appropriate use of fiscal and monetary measures, political stability, better supervision and prudential regulations. Furthermore, because financial development seems important to economic growth in Nigeria, measures should be taken to reduce government inefficiencies in order to release resources for the development of financial institutions.

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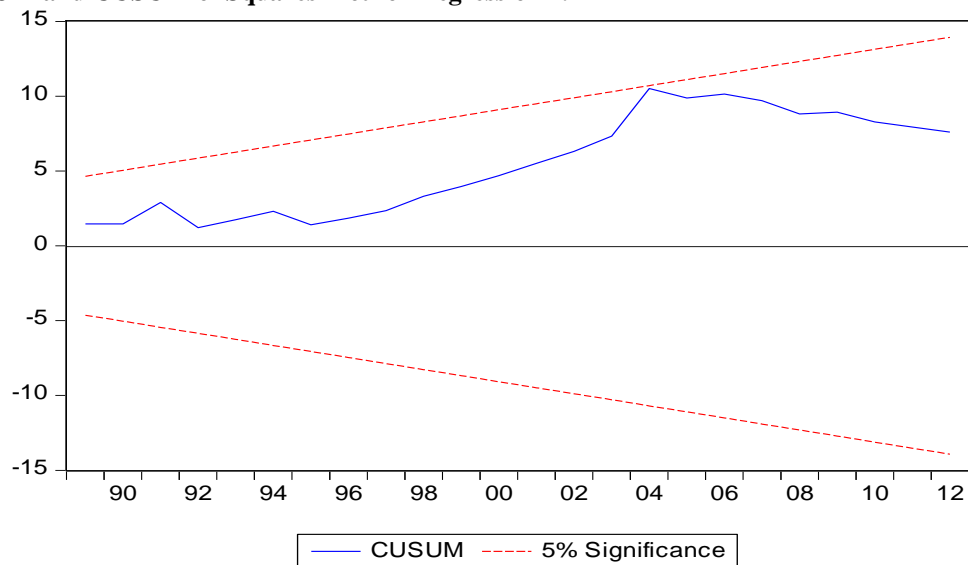
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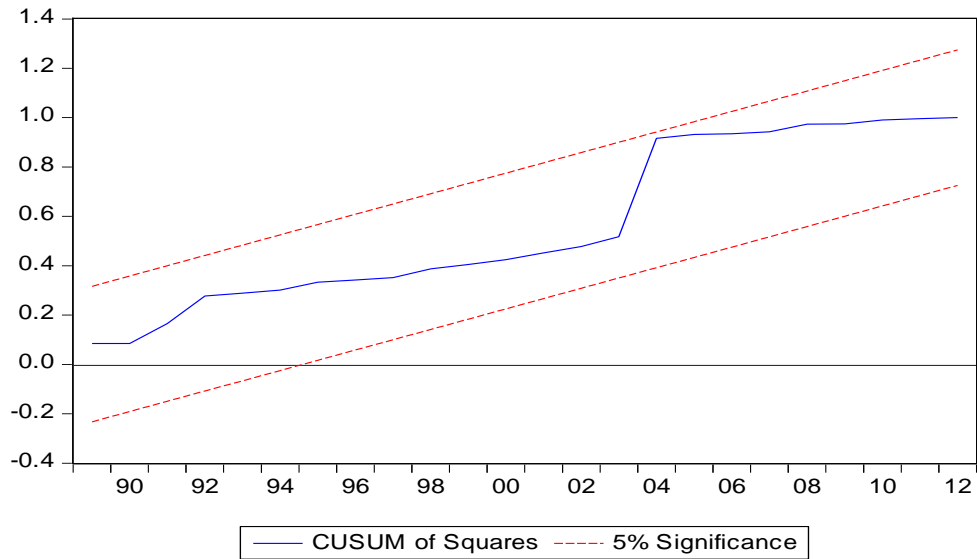
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A1: CUSUM and CUSUM of Squares Plot for Regression 1.



A2: CUSUM and CUSUM of Squares Plot for Regression 2.





A3: CUSUM and CUSUM of Squares Plot for Regression 3.

