FINANCIAL LIBERALIZATION AND SMALL MEDIUM SCALE ENTERPRISES GROWTH IN NIGERIA

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Abstract

This paper examined the relationship between financial liberalization and the growth of Small and Medium Scale Enterprises (SMEs) in Nigeria controlling for some other key macroeconomic variables such as investment, inflation and the domestic national output (GDP). Using annual data covering the period 1981-2012, we estimated the effect of the macroeconomic variables on the growth of SMEs. An index which measured the gradual progression and institutional changes involved in financial liberalization was constructed for this study. A number of interesting results were obtained. First, unlike previous studies which concluded that financial liberalization leads to a reduction in financing constraint of SMEs thereby leading to their growth; our results showed that financial liberalization had negative though non-significant effect on the growth of SMEs in Nigeria. Second, the results also showed that inflation had a positive and significant effect on the growth of SMEs in Nigeria. Investment had a positive though non-significant effect on the growth of SMEs in Nigeria. Finally, GDP had a large negative but significant effect on the growth of SMEs. On the basis of the result obtained from the study, government policies towards further liberalization of the financial sector of the country might not lead to an increase in the growth of SMEs given the existence of a negative relationship between SMEs growth and financial liberalization.

Keywords: Financial Liberalization, SME Growth, Auto Regressive Distributed Lag, Nigeria

JEL Classification: *B26, D53, C13, F41*

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1.0 INTRODUCTION

Small and medium scale enterprises often face different kinds of challenges. These problems are usually different from those that constrain the growth of bigger firms. Some of the problems that limit the growth and sometimes lead to the failure of small and medium scale enterprises in developing countries include; economic uncertainty due to the inconsistency of government policies, shortage of capital due to inability to access credits from banks and other non-banking financial institutions, high operating cost, inadequacies resulting from the poor state of infrastructural facilities, lack of transparency and corruption, absence of government policies to support the growth of small and medium-sized businesses (Ugwushi 2009).

However, access to finance has been identified as the key constraint to the growth of small and medium scale enterprises (IFC, 2010a). Enterprise surveys conducted across 120 countries by International Finance Corporation (IFC) in 2010 showed that SMEs face more severe financing constraints than larger firms particularly in low income countries.

Statistics showed that only 17 and 32 percent of firms in low and middle income countries respectively had a loan or line of credit (IFC, 2010a). The ratio was over 50 percent for high income countries. The SMEs finance gap was attributed to be the result of a mismatch between the needs of small firms and the supply of financial services which are easier for larger firms to access.

Financial access survey also conducted by IFC (2010b) which received response from over 142 countries showed that SME loan as a percentage of lending volume are generally low in developing countries implying a more restricted access to finance. The figure was 15 percent for developing countries and 19 percent for developed countries (IFC, 2010b).

Several scholars have argued in support of the view that financial liberalization always leads to increased savings and more efficient allocation of credit (McKinnon and Shaw 1973, Balasa 1989, Levine et al. 2000, Fowowe 2008a). In contrast, some other authors have argued that financial liberalization has led in many cases to disappointing results (Demirgüç-Kunt and Detragiache 1998, Stiglitz 2000). The view in this strand is that liberalization induces excessive risk-taking, increases macroeconomic volatility and leads to more frequent crises.

The Nigerian government embarked on the liberalization of the financial sector with the aim of building a more efficient, robust and deeper financial system which can support the growth of private enterprises. This was expected to address the difficulty experienced by small and medium scale enterprises in accessing credit. The liberalization

of Nigeria's financial sector reached a remarkable point in August 1987. The first major step involved the deregulation of interest rates and the expectation was for economic indices to improve. The reforms have been deepened over time and in 2009, a new economic blueprint for the Nigerian economy was launched tagged vision 20:2020. Its aim was to prod Nigeria into a path of sustained social and economic progress and thereby making the country rank among the top 20 economies of the world by the year 2020. A major strategy identified for obtaining such sustained economic growth is the formulation of economic policies that encourage private sector driven growth and competitiveness. Therefore, it becomes pertinent to assess the impact of financial liberalization on small and medium scale enterprises which have been identified as key to fostering industrialization and economic prosperity.

This paper is broadly aimed at investigating the impact of financial liberalization on the growth of small and medium scale businesses in Nigeria. It is more specifically aimed at examining the impact of increased access to credit on small and medium scale enterprises in Nigeria. Several studies have been carried out to assess the impact of financial liberalization on the different sectors of the economy. Existing empirical studies (Ogun, 1986; Oshikoya, 1992; Seck and El Nil, 1993; Matsheka, 1998; Allen and Ndikumana, 2000; Fowowe 2008; Ogwumike and Ofoegbu 2012; Orji et al. 2015) have not adequately captured the gradual institutional changes that financial liberalization entails to a recent time period. Some of the studies, such as Ogwumike and Ofoegbu (2012) and Allen and Ndikumana (2000), employed the ratio of liquid liabilities to GDP as a measure of financial intermediation. But this approach does not capture the specific liberalization policies that have been embarked upon in the country overtime. Other studies such as Orji et al. (2015) and Woldie and Kolawoleadeniji (2008) used the ratio of private sector credit to GDP as a proxy for financial liberalization. This also does not capture the gradual institutional changes which financial liberalization entails.

Few other studies such as Seck and El Nil (1993), Oshikoya (1992), and Matsheka (1998) used the real rate of interest as a measure of financial liberalization but this variable captures only one component of financial liberalization - interest rate deregulation. Since financial liberalization does not just consist of interest rate deregulation, such studies are likely to suffer from omitted variable bias.

A far more detailed study of the impact of liberalization is Fowowe (2008). He developed an index for measuring liberalization using a matrix of seven liberalization components. These include bank denationalization and restructuring, interest rate liberalization, strengthening of prudential regulations, directed credit abolition, free entry into banking, capital account liberalization and stock market deregulation. However, this study clearly leaves out the major financial reforms that were embarked on from the period after the year 2002. Importantly, the effect of landmark policies such as bank recapitalization which was carried out between 2004 and 2005 are not

captured. Bank recapitalization is a reform policy designed to enable the banking industry develop the required resilience to support the economic development of the nation by efficiently performing its function of financial intermediation.
Also, the foreign exchange policy of any country has significant implications on the growth of businesses. This is especially apt in developing country where most business technology is imported and unfavourable foreign exchange policies could therefore stifle business growth. The foreign exchange policies in Nigeria has witness several reversals and modifications. Reflecting these swings in Nigeria's foreign exchange policy reforms further make for comprehensively capturing the sequence of events characteristic of financial liberalization.

This paper expands the frontier of knowledge by constructing an indicator that effectively captures the progressive changes that financial liberalization entails within the Nigerian economy. This more robust financial liberalization index which captures bank recapitalization and foreign exchange policy reforms clearly reflects the recent changes in financial reforms.

The paper has 5 sections; following the introductory section, a brief review of empirical literature is provided in section 2. Methodology and data related issues are presented in section 3. Empirical results are presented and discussed in section 4, while conclusion and policy implications are provided in section 5.

2. Literature Review

Several empirical studies have been carried out to examine the relationship between financial liberalization and growth. Therefore, for the sake of brevity the focus here will be restricted to the few papers which examined the relationship between financial liberalization and economic growth in Nigeria and some other countries. Also, studies which examined the relationship between financial liberalization and SMEs growth will be reviewed.

To date, substantial body of empirical work has evolved on the relationship between financial liberalization and economic growth since the pioneering works of Mckinnon (1973) and Shaw (1973) but only few of such studies have been carried out in Nigeria. Fowowe (2008b) empirically investigated the effect of financial liberalization on Nigeria's economic growth. An index which captures some of the specific policies associated with financial liberalization (bank denationalization and restructuring, interest rates liberalization, strengthening of prudential regulations, directed credit, free entry into banking, capital account liberalization, stock market deregulation) was constructed for the period 1972-2002. Using the Autoregressive Distributed Lag (ARDL) framework for estimation, the result of the empirical investigation suggested that a

positive relationship existed between economic growth and financial liberalization in the long-run. Considering the fact that there was a banking crises about 5 years after financial liberalization in Nigeria, the result supported the views that although financial liberalization might result in financial fragility in the short run, it is growth-enhancing in the long run.

Owusu and Odhiambo (2014) using the Autoregressive Distributive Lag (ARDL) bounds testing approach, equally examined the impact of financial liberalization on economic growth in Nigeria. Using principal component analysis (PCA) to calculate the financial liberalization index for the period 1969-2008 the estimation result showed that the impact of financial liberalization policies on economic growth in Nigeria was positive and statistically significant both in the long-run and short-run. For instance, they found that a 1 percent increase in the financial liberalization index led to about 0.15 percent increase in economic growth.

The effect of financial liberalization on the growth of SMEs has also been empirically investigated in several studies (Koo and Shin (2004) and Ghosh (2006). Koo and Shin (2004) using annual Korean firm level data from 1980 to 2000 empirically examined the effect of financial liberalization on corporate investment. A financial liberalization index was constructed using the principal component analysis to capture seven reform variables (Interest rate deregulation, reduction of entry barriers, reduction of reserve requirements, reduction of credit controls, privatization of state banks, strengthening of prudential regulation and liberalization of security markets) based on Levine et al (2000) financial liberalization index. Result of estimation using the generalized method of moments (GMM) estimation showed that financing constraints of firms was significantly reduced during the liberalization era. Smaller firms also got much wider access to outside credit after liberalization.

Ghosh (2006) investigated empirically the effect of financial liberalization on Indian firms. Using a panel data set of over 1000 listed Indian manufacturing firms for the period 1995-2004, the study examined whether financial liberalization led to an easing of financial constraints. A financial liberalization index which captured several dimensions of liberalization (reserve requirements, interest rate controls, credit controls, entry barriers, privatization, prudential regulations and international financial transactions) was constructed and generalized method of moments (GMM) was used for estimation. Result of estimation found that financial liberalization led to a significant reduction in the financing constraint of firms by reducing the effect of cash flow on investment. When distinction was made between the sizes of firms (small and large), estimation result showed that the effect of financial liberalization was more notable in the case of small firms.

Imran et al (2013) empirically investigated the effect of financial liberalization on the growth of small firms in Pakistan. The ratio of private credit to GDP and ratio of market capitalization to GDP were used as financial development indicators. For empirical analysis, the study utilized cross-firm panel data of 8 firms listed on the Karachi Stock Exchange (KSE) spanning the period 1984 to 2010. Fixed effect model (FEM) was used to find the individual specific effect of the model and the result of estimation indicated that the total assets and economic development of the country are crucial factors which impact the firm's growth. Both indicators of financial development indicators were not significantly associated with the firm's growth. This was attributed to the underdeveloped financial and legal system in the country.

From the foregoing review of the extant literature it is clear that a considerable amount of empirical effort has been devoted to investigating the impact of financial liberalization policies on the macroeconomic performance of different countries (See details in Ogun, 1986; Oshikoya, 1992; Seck and El Nil, 1993; Matsheka, 1998; Allen and Ndikumana, 2000; Fowowe 2008a; Ogwumike and Ofoegbu 2012; Orji et al 2015). While five of these eight papers focused on the Nigerian economy, there are a number of aspects of the nexus of interest that have been left uncaptured. First, the gradual institutional changes that epitomizes the process of financial liberalization are mostly not adequately covered. Second, and more importantly, the impact of financial sector reforms on growth propellers such as small and medium scale enterprises growth is not covered in the empirical literature particularly on Nigeria. This aggregate orientation of the studies (i.e aggregate growth rather than SMEs growth) is for instance evident in the study by Owusu and Odhiambo (2014). The authors used the Autoregressive Distributive Lag (ARDL) approach to probe the impact on Nigeria's economic growth of financial liberalization. Their findings showed a positive effect that was statistically significant over both the short-run and long-run horizons.

This research improves upon existing studies on the impact of financial liberalization and growth. A more comprehensive financial liberalization index which tracks the gradual progression of financial reforms in Nigeria from 1980 to 2012 was developed. Moreover, in the absence of any country specific study on the effect of financial liberalization on SMEs growth in Nigeria; this study fills the knowledge gap and will thereby serve as a guide for financial policy reforms in Nigeria.

3. Methodology and Data Issues

We begin the econometric estimation with a test for stationarity using the augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests before proceeding to establish the existence or otherwise of a long-run relationship between the dependent variable and the explanatory variables.

This study then employs the autoregressive distributed lag model (ARDL) introduced by Pesaran et al. (2001). The ARDL approach can be used to test the existence of a level relationship between a dependent variable and a set of regressors, when it is not known with certainty whether the underlying regressors are trend- or first-difference stationary or a combination of both (i.e. *I*(0), *I*(1) or a combination of both). The small sample properties of the ARDL approach have been adjudged to be far superior to that of the Johansen and Juselius Cointegration technique.

3.1 The methodology

The ARDL specification for this study is given as follows:

$$\begin{aligned}\Delta Y &= \gamma_0 + \gamma_1 Y_{t-1} + \gamma_2 FINDEX_{t-1} + \gamma_3 INV_{t-1} + \gamma_4 INF_{t-1} + \gamma_5 GDP_{t-1} \\ &+ \sum_{i=1}^{\rho} \tau_{1i}\, \Delta Y_{t-i} + \sum_{i=0}^{\rho} \tau_{2i}\, \Delta FINDEX_{t-i} + \sum_{i=0}^{\rho} \tau_{3i}\, \Delta INV_{t-i} + \sum_{i=0}^{\rho} \tau_{4i} \Delta INF_{t-i} \\ &+ \sum_{i=0}^{\rho} \tau_{5i}\, \Delta GDP_{t-i} \\ &+ \varepsilon_t \qquad \ldots 1\end{aligned}$$

Where γ_0 is the drift component, Y is the SMEs output growth (the amount of loans given by commercial banks to SMEs is used as a proxy for their output growth. This is simply because financial markets anticipate future growth. Financial institutions lend more if they think a sector will grow), FINDEX represents the financial development index. Financial liberalization represents the primary explanatory variable of interest in this study. INV represents investment (Gross capital formation is used as a proxy for investment), INF represents inflation (we use the rate of inflation as a control variable to detect possible biases resulting from price level changes which makes long-term financial contracting difficult (Demirguc-Kunt and Detriagiache (1998)), GDP (Real Gross Domestic Product) represents the domestic national output of the country. Finally, ε_t denotes the white noise; γ_1 to γ_5 are the long-run multipliers while the lagged value of ΔY_t and the current and lagged values of $\Delta FINDEX_t$, ΔINV_t, ΔINF_t and ΔGDP_t represent the short-run dynamic component of the model.

The first step in the ARDL bounds test approach is to test for a long-run relationship among the variables using F-tests. The null hypothesis in the equation is H_0: $\gamma_1 = \gamma_2 = \gamma_3 = \gamma_4 = \gamma_5 = 0$, which implies the non-existence of long-run relationship. The test which normalizes on Y is represented as: F_Y(Y/FINDEX,INV,INF,GDP).
Next, to ascertain cointegration (the existence of long-run relationship) among the variables, Pesaran et al. (2001) provides two sets of critical values, [I(0) and I(1)], for the cointegration test. The lower critical bound assumes that all the variables are I(0), meaning that there is no cointegration among the variables, while the upper bound assumes that all the variables are I(1) implying the existence of a long-run relationship. If the computed F-statistics exceeds the upper critical value, then the null hypothesis of no long-run relationship can be rejected irrespective of the order of integration. If it is below the lower critical value, the null hypothesis of no cointegration cannot be rejected. However, if the computed F-statistics falls within the critical value bounds, then the test is inconclusive. However, the critical values reported in Pesaran et al. (2001) have been argued to be for large sample sizes from 500 observations and above and are therefore not applicable for smaller sample sizes (Narayan (2005)). Thus for this study, the critical values in Narayan (2005) is adopted given our sample size. Also, in order to choose the optimal length of each variable to obtain the long-run coefficients, the ARDL method estimates $(p + 1)^k$ number of regressions. Where p is the maximum number of lags and k is the number of variables in the equation. The model is selected using the Schwartz Bayesian Criterion (SBC).

If a long run relationship exists among the variables, the error correction (ECM) form of the ARDL model is estimated. It is given as:

$$\Delta Y = \beta_0 + \sum_{i=1}^{p} \psi_i \Delta Y_{t-i} + \sum_{i=0}^{p} \phi_i \Delta FINDEX_{t-i} + \sum_{i=0}^{p} \varpi_i \Delta INV_{t-i} + \sum_{i=0}^{p} \gamma_i \Delta INF_{t-i} + \sum_{i=0}^{p} \eta_i \Delta GDP_{t=i} + \alpha ECM_{t-1} + \varepsilon_t \quad \ldots 2$$

The error correction term (α) indicates the speed of adjustment back to long-run equilibrium after a short-run shock.

3.2. Data Issues: Description, Construction and Sources

To explore the impact of financial reforms on the growth of SMEs, we need a measure of financial liberalization and SMEs growth data. An ideal index of financial reform should measure the various aspects of the deregulatory and institution building process (Bandiera et al. (2000)). The index for financial liberalization, in this study is constructed based on reports from various sources on the deregulation and institutional reforms in the Nigerian financial sector from 1981 to 2012.

The financial liberalization index developed in this study draws from Bandiera et al. (2000), Laeven (2003) and Fowowe (2008). Our index summarizes exogenous changes in seven liberalization components. They include bank denationalization and restructuring, interest rate liberalization, strengthening of prudential regulation, directed credit, free entry into banking, capital account liberalization, stock market liberalization and foreign exchange market liberalization.

Based on an analysis of the historical evolution in each case, the timing towards major policy reforms and policy reversals have been identified under each of the headings. Each of these components is assigned a value of zero prior to liberalization and a value of one after liberalization. This gives a matrix of eight dummy variables and the index is the addition of the variables for each year. The table showing our computed financial liberalization index is in the appendix.

Annual time series data covering the period 1980 to 2012 is used for the analysis. Data for commercial bank loans to SMEs which is used as a proxy for SMEs growth is obtained from the Central Bank of Nigeria Annual Statistical Bulletin. Data for investment, inflation and real GDP is obtained from the World Bank's World Development Indicators (2015).

4. EMPIRICAL RESULTS AND DISCUSSION

This section begins with a presentation of the stationarity result to show the order of integration of the variables. Following this, the result of the test of the existence of a long-run relationship using the bounds testing procedure is presented. Next, the ARDL result for the estimation of the impact of financial liberalization on SMEs growth will be presented. This is then followed by a robust discussion of the estimation results and its implications.

4.1. Unit Root / Stationary Test

Recent advances in econometrics have shown that most macroeconomic time series are usually stationary around a deterministic trend. When non-stationary time series data are used in the estimation of econometric models, it yields spurious regression results.

Thus, as a rule of thumb, macroeconomic time series are subjected to stationarity testing before they are used for estimation.

Table 1 presents the result of unit root test based on the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) statistics of the levels and first differences of the variables. The null hypothesis for the ADF and PP test is that the series has a unit root against the alternative of stationarity.

Table 1 Result of Unit Root Tests

Variables	Augmented-Dickey Fuller			Phillips-Perron		
	Level	First Difference	I(d)	Level	First Difference	I(d)
Y	-2.729^{x***}	-	I(0)	-2.788^{x***}	-	I(0)
INV	-2.576^{y**}	-5.815^{y**}	I(1)	-4.267^{x**}	-	I(0)
INF	-2.619^{x***}	-	I(0)	-2.552^{y**}	-9.104^{y**}	I(1)
GDP	-1.642^{y**}	-4.880^{y**}	I(1)	-1.631^{y**}	-4.845^{y**}	I(1)
FINDEX	-3.417^{x***}	-	I(0)	-1.427^{y**}	-4.232^{y**}	I(1)

***Note**: *, ** and *** represents 1%, 5% and 10% levels of significance respectively (x) and (y) designates models with constant and models with constant and trend respectively*

The unit root test result using the Augmented Dickey-Fuller method showed that the series for commercial bank loans to SMEs (Y), inflation (INF) and the financial liberalization index (FINDEX) were stationary at levels. However, the series for investment (INV) and gross domestic product (GDP) became stationary after first differencing. Using the Phillips – Perron method, the unit root test result showed that the series for commercial bank loans and investment were stationary at level. However, the series for inflation, gross domestic product and the financial liberalization index became stationary after the first differencing.

4.2 Test for Cointegration Relationship

4.2.1. Bounds Cointegration Test

The unit root test result obtained above shows that the series are of different orders of integration. The appropriate test to use when the series are of different orders of integration is the bounds cointegration test as proposed by Pesaran, Shin and Smith (2001). However, the critical values reported in Pesaran et al. (2001) have been argued

to be for large sample sizes. The critical values adopted to provide critical value bounds for our regressors is the critical values in Narayan (2005).

Table 2 Bounds Cointegration Test Result:

Estimated model		**Lny=*f*(inv,inf,lngdp,findex)**
Optimal lags		(1, 4, 3, 4, 2)
F-Statistic		7.516**
Significance level	lower critical bound	upper critical bound
1%	5.856	7.578
5%	4.154	5.540
10%	3.430	4.624

***Note**: The upper (lower) bounds critical values are obtained from Naranyan (2005). ** Represents significant at 5% level of significance.*

From table 2, the F-statistics is greater than the critical value for the upper bound at 5 percent, thus we can conclude that there is cointegration. Given the result obtained, we proceeded to estimate both the short-run and long-run models.

4.3 SMEs Growth Short Run ARDL Estimates

Table 3 Short Run ARDL Estimates for SMEs Growth

Dependent Variable	**Y**			
Variables	Coefficient	Std. Error	t-Statistic	Prob.
TREND	0.465*	0.067	6.883	0.000
Δ(INV)	0.048	0.030	1.573	0.154
Δ(INV(-1))	-0.078**	0.037	-2.068	0.072
Δ(INV(-2))	0.110**	0.044	2.500	0.036
Δ(INV(-3))	-0.087**	0.033	-2.357	0.046
Δ(INF)	0.003	0.003	0.794	0.450
Δ(INF)	0.010**	0.004	2.514	0.036
Δ(INF)	-0.010*	0.002	-3.681	0.006
Δ(GDP)	-0.873	0.717	-1.217	0.258
Δ(GDP(-1))	2.144**	0.878	2.441	0.040
Δ(GDP(-2))	-1.539	0.877	-1.754	0.117
Δ(GDP(-3))	4.371*	0.717	6.095	0.000
Δ(FINDEX)	0.168	0.094	1.787	0.111
Δ(FINDEX(-1))	-0.170**	0.076	-2.219	0.057
ECT(-1)	-1.131	0.132	-8.506	0.000
R-squared	0.993	Durbin-Watson stat		3.360
Adjusted R-squared	0.979			
S.E. of regression	0.166			
Sum squared resid	0.220			
Log likelihood	28.063			
F-statistic	69.119			

Prob(F-statistic)	0.000		

***Note**: * Represents statistical significance at 1% significance level, ** Represents statistical significance at 5% significance level, *** Represents statistical significance at 10% significance level.*

The short run ARDL estimates in table 3, for the growth of SMEs in Nigeria, is suggestive of a positive yet non-significant contemporaneous linkage between investment and SMEs growth in Nigeria. However, its first period-lag shows a negative but significant growth impact while its second period-lag as well shows a positive and significant growth impact. The estimate for investment in table 3 shows that in the short-run, a 1 percentage point increase in investment will lead to a 0.048 percentage increase in the growth of SMEs in Nigeria. Put together, investment thus seem to alter the path of SMEs growth in Nigeria in the short-run. This result highlights the need for more reforms that will stimulate a higher level of investment to achieve a greater level of SMEs growth.

The estimates for inflation in our short-run ARDL model is suggestive of a positive but non-significant association between inflation and SMEs growth. Moreover, the second estimate of inflation in the model shows a positive and significant growth impact but with inconsiderable magnitude. The estimate shows that a 1 percentage point increase in inflation will lead to a 0.011 increase in the growth of SMEs. Hence, inflation does not seem to alter the path of SMEs growth in the short-run to a great extent indicative of doubt about the potency of monetary policy measures, aimed at curbing inflation, in mitigating slow-down in the growth of businesses.

Also in table 3, the estimate for GDP is indicative of a negative though non-significant contemporaneous linkage between GDP and SMEs growth in the short-run. Nonetheless, the first period-lag shows a positive and significant growth impact with appreciable magnitude. Its second period-lag is suggestive of a negative but non-significant growth impact; this trend seems to be reversed in the third period lag which is indicative of a positive and significant growth impact. Put together, in the short-run, GDP seems to change the direction of SMEs growth in Nigeria and there is a need for the government to ensure that policies that stimulate economic growth are implemented.

From table 3, the short-run estimate for financial liberalization index is suggestive of a positive though non-significant relationship between financial liberalization and SMEs growth in Nigeria. In the short-run, financial liberalization does not seem to alter the path of SMEs growth in Nigeria over the period studied. This brings some doubts about the efficacy of financial reforms in settling the debate about the nature of linkage between the financial and real sectors of the economy.

The result from table 3 shows that the error correction term (ECT(-1)) is negative indicating that the feedback mechanism is very effective in Nigeria in stabilizing shocks to the domestic economy. The convergence to long-run equilibrium after a shock appears to be instantaneous given the value of the error correction term. This notwithstanding, the adjustment parameter value falls slightly out of the admissible boundary (i.e. the seeming perfect adjustment of the system to disequilibrium should be viewed with considerable caution).

The coefficient of determination (R-squared) from our result shows that all the variables included in the model were jointly good predictors of SMEs growth.

4.4 SMEs Growth Long Run ARDL Estimates

Table 4 Long Run ARDL Estimates for SMEs Growth

Dependent Variable	**Y**			
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	222.318*	18.903	11.760	0.000
INV	0.038	0.038	0.996	0.348
INF	0.016*	0.003	5.416	0.0006
GDP	-7.153*	0.634	-11.273	0.000
FINDEX	-0.006	0.089	-0.071	0.945

***Note**: * Represents statistical significance at 1% significance level, ** Represents statistical significance at 5% significance level, *** Represents statistical significance at 10% significance level.*

The long-run ARDL estimates obtained from our estimation presented in table 4 shows that investment in Nigeria had a positive though non-significant effect in the long-run on the growth of SMEs over the period of study. The result showed that a 1 percentage point change in investment will lead to 0.038 percentage change in SMEs growth in Nigeria within the period studied. This agrees with the conceptual postulation that investment will have a positive effect on SMEs growth overtime; although the magnitude of such effect in Nigeria over the period studied is quite low. A plausible reason for this in a developing country like Nigeria is very obvious; although increase in investment should significantly encourage the growth of SMEs the business environment in Nigeria has been a major constraint. According to the World Bank's

2016 Doing Business index, Nigeria was ranked 169 out of 189 economies. From the report, Nigeria was ranked 131 out 189 in starting up a business which is quite low. Also, Nigeria was ranked 181 out of 189 in the ease of registering property according to the same report. An entrepreneur requires about 28 days for completing the registration process involved in setting up a business in Lagos which is the nation's financial hub. Given the difficulty of starting up a new business, it is expected that small and medium firms might not be able to take advantage of any investment opportunity created by changes in investment.

Economies of scale in production can be seen as another plausible reason why an increase in investment might not lead to a significant increase in growth of SMEs as shown in our result. Large firms are often more efficient in production compared to smaller ones since they can benefit from economies of scale. Small or medium size firms given the cost and time required to start up a new business might not have the capacity to take advantage of new investment opportunities and maximize profit. Thus, unless government consciously introduces policies that helps in reducing the impediments to establishing a new business larger firms will keep growing larger in the long run leading to the exit of smaller businesses.

Inflation had positive and significant effect on the growth of SMEs over the long-run. This effect follows our conceptual postulation that low values of inflation will lead to the growth of SMEs in the long-run. It can be concluded that maintaining a low level of inflation in the country will be a good strategy to encourage the growth of new business. GDP had a long-run negative but non-significant effect on the growth of SMEs with very large magnitude. Private consumption demand which has majorly contributed to the increase in GDP has been satisfied through importation. This is obviously a plausible reason why an increase in GDP had a negative effect on the growth of SMEs. To reverse this trend the government needs to embark on conscious policies that will aid the growth and competitiveness of new businesses. Financial liberalization had a negative though non-significant effect on the growth of SMEs in the long-run. There is a need for critical review to appraise the success of the financial reform policies thus far and then making changes where necessary. Although banks and other non-banking financial institutions might have access to more funds as a result of the financial liberalization policies. There is a tendency for them choose to redirect such funds to financing non-productive activities with higher returns to boost their profit base.

4.5 Stability Test

To ascertain the appropriateness and stability of our model for making long run decisions, we employed the cusum and cusumsq residual tests.

Figure 1: Cusum Residuals

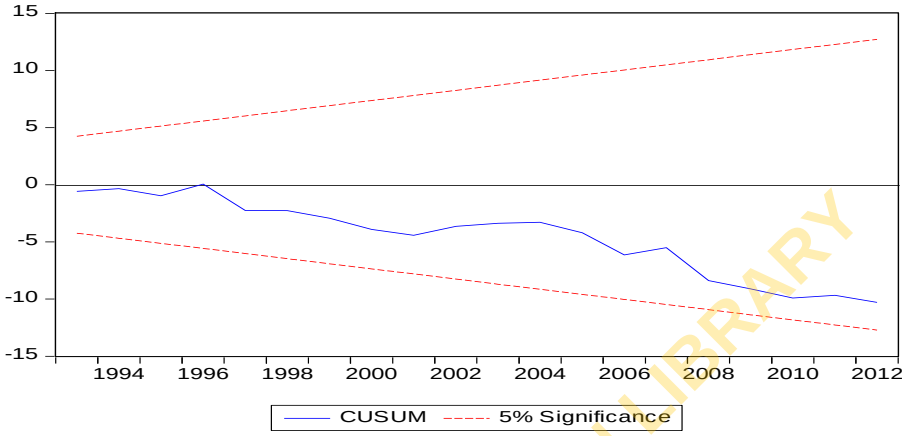
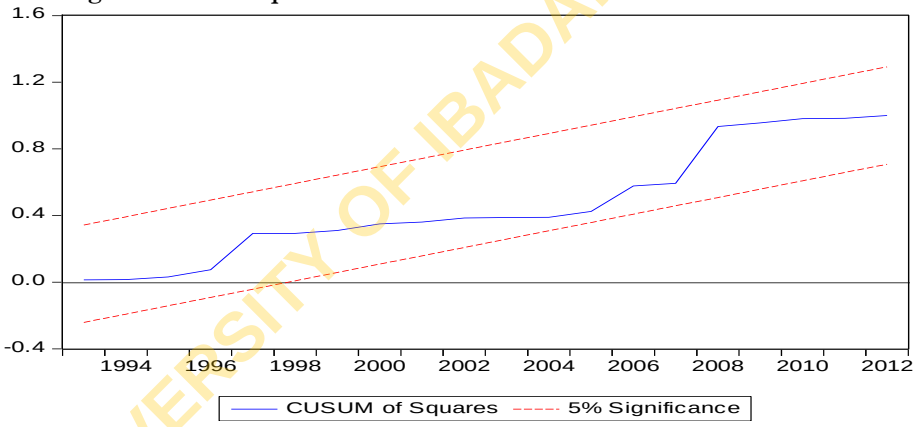


Figure 2: Cusumsq Residuals



Figures 1 and 2 show that both the plots of the cumulative sum of recursive residuals and cumulative sum of squares for the model using the Cusum and Cusumsq tests lie within the five percent critical bounds. This by implication means that the parameters of the model do not suffer from any structural instability over the period of study. In other words all the coefficients in the error correction model are stable and can be used for forecasting when making economic decisions. However, we note that the cumulative sum of squares of recursive residuals (cusumsq) shows some variation and approaches the upper bound of the acceptable range of the critical bounds around 2009. This tendency to go outside the bounds is subsequently reversed.

5. CONCLUSION AND POLICY IMPLICATION

This paper examined the relationship between financial liberalization and the growth of SMEs in Nigeria. The objectives of this included; examining the impact of increased access to credit on small and medium scale enterprises. Also, examining the impact of other macroeconomic variables on the growth of small and medium scale enterprises.

To achieve the set objectives, first, a financial liberalization indicator was constructed which effectively captured the progressive changes that financial liberalization entails within the Nigerian economy. Second, using annual data spanning the period 1981 to 2012, we assessed the impact of some key macroeconomic variables on the growth of SMEs. Important findings were made from the study based on the objectives we aimed at achieving.

Financial liberalization had a negative though not significant effect on the growth of SMEs in Nigeria. Positive changes in financial liberalization measures led to a reduction in the growth of SMEs as measured using the loans disbursed from commercial banks to SMEs.

For the macroeconomic variables that were examined; inflation had a positive and significant effect on the growth of SMEs, investment also had a positive though not significant effect on the growth of SMEs. However, GDP had a negative but significant effect on the growth of SMEs.

Based on the findings of the study which indicates the observed relationship between the growth of SMEs, financial liberalization and some key macroeconomic variables, Government policies which push towards further liberalization of the financial sector might not lead to SMEs growth. There is a need to reassess the liberalization policies that have been implemented thus far. Government, rather than focusing more on policies that would control the rate of inflation, should formulate policy measure that will make the business environment in Nigeria more attractive and suitable for business operators. Efforts should also be directed at making the country's economy more diversified. Policy measures targeting the development of other sectors of production apart from oil and gas such as agriculture, manufacturing and services should be formulated. On a final note, one potentially interesting area that future research can focus on is the use of varying weights in the computation of the financial liberalization index. This treatment may yield more interesting scenarios than the assumption of fixed weights that underpinned our analysis in this paper.

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APPENDICES

FINANCIAL LIBERALIZATION INDEX

YEARS	BANK DENATIONALISATION & RESTRUCTURING	INTEREST RATE LIBERALIZATION	STRENGTHENING OF PRUDENTIAL REGULATIONS	DIRECTED CREDIT	FREE ENTRY INTO BANKING	CAPITAL ACCOUNT LIBERALIZATION	STOCK MARKET DEREGULATION	FOREIGN EXCHANGE MARKET LIBERALIZATION	FIN DEX
1981	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	0	0	0
1987	0	1	0	1	1	0	0	0	3
1988	1	1	0	1	1	0	1	0	5
1989	1	1	0	1	1	1	1	0	6
1990	1	1	0	1	1	1	1	0	6
1991	1	0	1	1	0	1	1	0	5
1992	1	0	1	1	0	1	1	0	5
1993	1	0	1	1	0	1	1	0	5
1994	1	0	1	1	0	1	1	0	5
1995	1	0	1	1	0	1	1	1	6
1996	1	0	1	1	0	1	1	1	6

1997	1	1	1	1	1	1	1	1	8
1998	1	1	1	1	1	1	1	1	8
1999	1	1	1	1	1	1	1	1	8
2000	1	1	1	1	1	1	1	1	8
2001	1	1	1	1	1	1	1	1	8
2002	1	1	1	1	1	1	1	1	8
2003	1	1	1	1	1	1	1	1	8
2004	1	1	1	1	1	1	1	1	8
2005	1	1	1	1	1	1	1	1	8
2006	1	1	1	1	1	1	1	1	8
2007	1	1	1	1	1	1	1	1	8
2008	1	1	1	1	1	1	1	1	8
2009	1	1	1	1	1	1	1	1	8
2010	1	1	1	1	1	1	1	1	8
2011	1	1	1	1	1	1	1	1	8
2012	1	1	1	1	1	1	1	1	8

Diagnostic Test Results for the ARDL Model

Serial Correlation	F-statistic	6.740545	Prob. F(2,5)	0.0292
Breusch-Godfrey LM Test	Obs*R-squared	19.37625	Prob. Chi-Square(2)	0.0001
	F-statistic	6.740545	Prob. F(2,5)	0.0292
Heteroskedasticity Test	**LM Statistic**		**Chi-Square Critical Value**	
Breusch-Pagan-Godfrey	22.07842		0.2804	
Harvey	21.41805		0.3142	
Glejser	24.07772		0.1932	
Engle's ARCH	5.810063		0.0159	
Jarque-Bera Test	**Jarque-Bera**		**Probability**	
	3.363337		0.186063	