

Macroeconomic Instability and Smes Growth in Nigeria: Error Correction Mechanism Approach (1999-2017)

Ogundele Abiodun Thomas¹, Awoniyi Olaoye Claudius², Okeya Isaac Olaitan³

¹Lecturer, Department of Banking and Finance, Afe Babalola University, Ado Ekiti, Nigeria

²Department of Banking and Finance, Afe Babalola University, Ado Ekiti, Nigeria

³Former Dean Faculty of Management Sciences, College of Technology, Esa-Oke, Nigeria

Management Consultant and Dispute Resolution Specialist, Liverpool (UK)

Corresponding author: Okeya Isaac Olaitan

Abstract: The paper examined the joint effect of macroeconomic variables such as exchange rate, interest rate, inflation, money supply and degree of openness on small and medium scale enterprises growth in Nigeria spanning from 1999 to 2017 Using Auto Regressive Distributed Lag (ARDL) estimation technique. Secondary sources of data were sourced from Central Bank of Nigeria (CBN) Statistical Bulletin, 2017. Relying on the cause and effect theoretical framework, it was found that, Phillips-Perron (PP) test showed that variables in the series were integrated of difference orders. ARDL bound test revealed that variables in the series moved together in a long run while long run coefficients of ARDL revealed that, money supply and inflation exert insignificant positive effect while exchange rate, inflation and degree of openness exert insignificant negative effect on small and medium scale enterprises growth in Nigeria. Furthermore, it was found that, as the joint effect of the variables employed in this study exert an insignificant effect on SMEs growth, the implication is that, there may be other variables not included in this study which may have a very strong significant effect on SMEs growth in Nigeria. The study concluded that, macroeconomic variables have an heterogeneous effect on the small and medium scale enterprises growth in Nigeria. It is recommended that, macroeconomic policies or initiatives that will incorporate the interest of small and medium scale enterprises should be pursued so that SMEs led growth could be achieved and sustained in Nigeria

Keywords: macroeconomic variables, SMEs growth, macroeconomic policies

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I. Introduction

Macroeconomic stability and growth have been acknowledged by the extant literature to be the core objectives of any economy (Sokcevic & Stokovac, 2011; Owolabi & Adegbite, 2014, Ayodeji & Ajala, 2018) and as such, macroeconomic policies of many developed and developing countries aim at pursuing and maintaining the duos. However, while stability is explain in respect to stability in the prices of goods and services, that is, stability in exchange rate, interest rate, consumer prices and other related prices in the economy, growth is explain in respect to continual increase in the total production of goods and services recorded each year in an economy. Saying this in another way, it is a continual increase in the synergy of numerous determinants of growth such as capital, human resources, technology, research and development etc (Solow-Swan, 1956; Romer-Domer, 2012). However, instability in the external and internal environment of an economy could render these objectives unachievable.

Macroeconomic instability explains the fluctuation or variability of those environmental factors such as interest rate, exchange rate, growth rate, unemployment, inflation rate, balance of payment etc. However, the combination effects of these variables contribute to the instability in an economy, especially the fluctuation of these variables could worsen the growth of small and medium scale enterprises in an economy. This is because, small and medium scale enterprises operate in dynamic environments in which they have limited control over, and it is essential for them to transact their businesses in such environments. Therefore, any shocks in the environment tends to affect their productivity

The importance of small and medium scale enterprises is recognized globally, they are critical sector to the sustainable economic development as they contribute to the growth of an economy most especially in the area of job creations, reduction in the level of poverty, wealth creation, development of local industries etc (Anigbogu, Onwuteaka, Edoko and Okoli, 2014; Babatunde & Michael, 2016). Although, the extent to which they performed these roles are mostly dependent on many factors which could be regarded as internal and external environmental factors which could be either be access to finance, access to raw materials, stable market for their product, foreign direct investment, foreign aid, growth rate. However, these irreplaceable prospects in

the economy could be hindered by instability in both the external and internal environmental factors, hence affecting its performance. It was also acknowledged by Kouser, Kousar, Rehman and Khaliq (2018) that macroeconomic instability is one of those constraints affecting the growth of businesses, but the magnitude of the impact across countries depend on the policies and structural characteristics of the countries.

According to Orogbu, Onyeizugbe & Chukwuma (2016), small and medium scale enterprises operate in a dynamics environment orchestrated by the interplay of various elements in the economic environments which interact to predict their performances, and as such, the effect could either make or mar the growth of the sector both in the short and long run. Therefore, when economy is performing, it evidences that, the macroeconomic variables or indicators of such economy is stable, thereby sending a signal to both local and foreign investors that such economy is performing and that companies or businesses would perform well in such an environment. It has also been observed that, many developing countries faces persistent instability due to the fragility and weakness of their economies, thereby unable to withstand and absorb shocks from both the internal and external environmental, as a result of this, small and medium scale enterprises are majorly hit because they have not gotten strength and stamina to operate successfully in unstable environments (Tambari, Chima & Ononogbo, 2018)

With respect to Nigeria economy, it is observed that the economy is characterized with fluctuation as a result of continuous and persistence changes in her macroeconomic variables; the economy is harsh and it threatened the survival of businesses, especially, the small and medium scale enterprises. Macroeconomics variables comprise of economic growth i.e gross domestic product, interest rate, exchange rate, growth rate, inflation rate, unemployment, balance of payment position etc (Achillah, 2011 as cited by Abel, 2014; Odior, Odior, 2013). Instability in these variables affects the economic growth and stability of an economy however, if these variables are stable for long time, it could serve as a signpost used in predicting the performance of an economy

Historically, since the return of democracy in 1999, macroeconomic variables such as exchange rate, interest rate, inflation rate, degree of openness, have been fluctuating, the effect of these have actually affected the general performance of the economy. For example, exchange rate of naira to dollars and other foreign currencies have been skyrocketing and expensive thereby affecting the productivity of small and medium scale enterprises. Not only that, interest rate on credit facilities has been discouraging as most of the SMEs could not afford to borrow due to high interest rate, this is believed will erode and take chunk part of their profits, hence, most of them resort to informal financing rather than formal financing. The extent to which the country has become a dumping ground for all forms of imported goods which could be produced and manufactured in the country also affect the production and patronage of the locally produce goods by small and medium scale. This is obvious from the gap between non-oil import and non-oil export of Nigeria as reported by CBN Statistical Bulletin (2017). Furthermore, increase in the level of inflation being experience in the country affects the purchasing power of business owners thereby affecting their cost of production and price of their products. Hence, continuous fluctuations in these variables could affect the manner at which SMEs operates.

The relationship between macroeconomic variables and SMEs growth is researched on due to the dearth of literature in this area of interest which addresses some of the hindering factors to SMEs. Literature is replete on small and medium scale enterprises however, the attention have actually been concentrated on its roles, prospects, and its effect on economic growth thereby lacking focus on the effect that macroeconomic variables could have on its growth. Studies were also concentrated on the effect of macroeconomic variables on manufacturing growth, performance of banks, stock market, and economic growth. This actually created gap in the literature. Therefore, the study examined the effect and the relationship between some selected macroeconomic variables (exchange rate, interest rate, trade openness, inflation and money supply) and small and medium scale enterprises growth in Nigeria from 1999-2017.

II. Literature Review

2.1 Conceptual Review

Divergent views have been observed in respect to the definition of small and medium scale enterprises, as a result of this, it may be difficult to sum up these definitions as seen by researchers. Mostly, it has been defined in respect to different measurements such as number of employees in an organization, turnover of the business, total value of assets owned by the business etc. For example, in Britain, USA, and European countries, small and medium scale enterprises are defined in terms of turnover, and number of employees in an organization Gbandi & Amisah, (2014). In Nigeria, it is defined as an enterprise that has an asset base (excluding land) of between N5 million to N500 million and labour force of between 11 and 300 belongs to the SME sub-sector. This means that in Nigeria, SMEs is defined in terms of assets base and number of employees. Therefore, the definition of SMEs is dependent on the definition given to it by the host country (Ayozie, Oboreh, Umukoro & Ayozie, 2013)

Small and medium scale enterprises can also be defined from the perspective of roles they performed in an economy. According to Hallberg (2011), small and medium size enterprises are the emerging private sector in poor countries and thus form the base for private sector-led growth. This implies that, most of the poor economies of the world or low income countries sees SMEs as a tool to achieve growth by encouraging and developing policies that will encourage many individuals to venture into businesses and also motivate private investors from other countries to bring in the dividend of their businesses with the aim of achieving economic growth.

In addition, it can also be described as enterprises that help in solving socio economic problems in an economy (Aremu&Adeyemi, 2011; Oke and Aluko, 2015). This is because, most of the poor nation are characterized with socio economic instability that ranges from high rate of unemployment, abject poverty, food insecurity, low standard of living, high dependency ratio, to mention but a few, however, these problems can be solved by this sector as they contribute by providing jobs to the teeming unemployed individuals thereby reducing the level of unemployment. Not only that, solving the problem of unemployment, indirectly help in solving the problem of poverty and low standard of living due to streams of income received in the cause of engaging in small businesses. The problem of food insecurity is also solved as we have many small businesses in different sectors of the economy such as agriculture, manufacturing and trade and services contributing through production of food for the whole population.

Furthermore, small and medium scale enterprises according Oke and Aluko, (2015) is described as a driving force for economic growth. This submission was also supported by Motilewa, Ogbari and Aka (2015) as they described small and medium scale enterprises to mean.

A sector that symbolize deployment of domestic savings for investment, important contribution to Gross Domestic Product (GDP) and Gross value, harnessing of native raw materials, employment creation, impoverishment reduction and alleviation, sweetening in customary living, increase in per capita financial gain, skills acquisition, save in technology and professional growth and diversification, curtailing rural-urban migration and resource utilization, contribution to the strength of business inter-linkages and integration mostly through the manufacturing of intermediate product to be used in huge-scale firms,

This definition is all encompassing and for the sector to be able to achieve all these, it requires political will by the government of the day to make the economy conducive for business to travail. Not only that, policy initiatives that will put the interest of the SMEs at the center will be sacrosanct, this in the long run, will help an economy in achieving its long run macroeconomic objectives.

1.1.1 Concept of Micro-economic Variables

Macroeconomic variables can be described under economic environment which means the totality of economic factors such as interest rate, exchange rate, inflation, money supply, foreign aid, revenue etc which exert considerable influence on the performance of economy. This economic environmental factors are essentially study indicators of economic stability however, fluctuation of these indicators may have a great implication on the economy as a whole (Orogbu, et al 2016). This definition portrayed that, macroeconomic variables as mentioned above could either be used to measure economic stability or economic instability. Long stability of these indicators help to ensure stability, that is, stability of all prices in the economy while long instability in these indicators portrayed that the economy is not stable. This is associated with fluctuation in interest rate, exchange rate, inflation rate, unemployment rate and others causing a huge negative effect on the economy as whole

Macroeconomic variables are always study by government so as to understand the present condition of an economy. With these indicators, it would be very easy for government to know when an economy is performing and when it is not performing. Not only that, it also helps the government to know which of the macroeconomic policies should be used or combination of policies to be used and when to formulate such a policy and implement it. This means that, macroeconomic variables stand as a signpost signaling the current trends of things in an economy. According to Sokservic&Stokovac, (2011), two major policies are essential in managing and controlling these variables which are fiscal policy and monetary policy.

Fiscal policy as a macroeconomic policy is used in sharpening and controlling the government expenditure and revenue with aim of achieving economic growth and stability while monetary policy is described to be central government policy employed towards targeting monetary and interest aggregates with the aim of promoting macroeconomics objectives which are economic growth, price stability, employment and favourable balance of payment position (Ayodeji & Ajala, 2017). However, there are consensus among the economists' that, only fiscal policy or monetary policy cannot achieve all these objectives as expected but advocating that, the combination of the two policies will go a long way in achieving the target goals (Bouakez, Cardia, & Ruge-Murcia, 2005 as cited by Sokservic&Stokovac, 2011).

The reason for advocating for the two policies is that, fiscal policy are unable to stabilize economic disturbance because when government expenditure increases, it ultimately crowd out private investment and

exacerbate economic fluctuations (Mountford & Uhlig, 2009) and government developmental projects deepen the macroeconomic instability rather than to stabilize them (Romer & Romer, 2010). Likewise, from the theoretical literature point of view as stated by Gerlach and Svensson, (2003) Ireland, (2007), monetary policy help the policy makers to stabilize economic instability but empirical literature documented that quantity of money is unable to stabilize fluctuation in output and inflation. Hence the need for the synergy effect from the two policies to bring about macroeconomic stability and growth in the long run

As a consequent of the above, inability of government to apply these policies at the right time, have a great cost for the economy. For example, macroeconomic instability may hamper investor's ability and willingness to undertake investment opportunities in a country that is suffering from instability (Montiel & Serven, 2004). Instability of interest rate for instance will discourage borrowing thereby affecting investment opportunity that can lead to growth. Continuous relying on importation rather than encouraging exportation will have a negative effect on the naira thereby making the exchange rate of naira to dollar expensive and unaffordable for local investors, the effect of these have great consequences in term of unfavorable balance of payment and continual depreciation of naira against other foreign currencies. Expansion in money supply with control of inflation will make funds available for investors; this will help to increase productivity which will resort to growth in the long run. Inflation as one of the macroeconomic variables could cause goods and services produced within to be expensive and less competitive in international market, discourage savings and consequently affect growth. Hence, high inflation in an economy lead to negative effect in the long run (Gylfason, 1997)

Therefore, as these factors affect the economic growth, it means all the sectors of the economy would be affected by the instability. For example, small and medium scale enterprises which are the driving force of most developing or low-income countries could be affected by instability in an economy that is characterized by high macroeconomic instability. The reasons for this was given by Kousar, Rehman and Khaliq (2018) that developing countries are unable to absorb the consequences of internal and external shocks and also that the business activities of developing economies are usually dependent on trade integration, foreign aid and foreign direct investment and cause the economy more open to external shocks, so any sudden shock tends to upset the economic activities.

2.2 Theoretical Framework

This study employed cause and effect theory as a framework. Cause and effect theory explain that, no event happens by chance but happens as a result of a cause. By applying this to the subject matter, it can be explained that small and medium scale enterprises growth is cause by the macroeconomic variables. The stability of the variables in a long run ensures efficient growth of the sector while continuous fluctuation of these variables could either make or mar the growth of the sector. According to Anghelache, Manole, Anghel and Diaconu (2016), cause and effect links between macroeconomics variables and growth provide useful information for policy makers in the government and private agencies on the systematic relationship that reveals the influences of certain factors on growth. When these variables are not stable, it is therefore becoming the responsibility of the government to ensure that macroeconomics policies are implemented to manage and control these variables so as to spur growth in all sectors of the economy. Small and medium scale enterprise is crucial to the economic development of a nation; however, to sustain the benefits derived from this sub-sector, macroeconomic variables must be stable. This theory was also employed by Kebede and Simesh (2015)

2.3 Empirical Review

Growth perspective through trade in Nigeria was studied by Eravwoke and Oyivwi (2012) in Nigeria using annul time series from 1970 to 2009 by employing Ordinary Least Square (OLS) estimation technique, Augmented Dickey Fuller (ADF) and the Johansen co-integration statistical approach on data covering the period of 1970-2009. It was found that long run relationship exists between dependent variable and independent variables while OLS result showed that the total trade and export are not statistically significant in explaining growth in Nigeria; however, the exchange rate is statistically significant in explaining growth in Nigeria.

Impact of macroeconomic factors on economic growth in Ghana was studied by Antwi, Mills and Zhao (2013) using a secondary sources of data spanning from 1980 to 2011. Data were collected and analyzed using a multiple regression and Johansen co-integration technique. Dependent variable was proxied by real gross domestic product per capita while independent variable was proxied by capital labour, foreign direct investment, foreign aid, inflation and government expenditure. It was found that, there is cointegration relationship between real GDP per capita, that is, economic growth and its macroeconomic factors. In addition, the short run test revealed that, speed of adjustment of long run disequilibrium is 20.4% per annum. While the macroeconomic variables such as foreign direct investment, foreign aid and government expenditure are statistically significant with positive effect on economic growth in Ghana

The Nigerian business environment and growth constraints of micro and small scale manufacturing industries was evaluated by Essien (2014) using a survey and descriptive statistics. Primary data were collected through questionnaire from 234 operators of micro and small scale businesses in Akwa Ibom Nigeria, Results showed that problem of infrastructure particularly-power, strict rules on, high interest rates on loan, multiple taxation, absence of tax holiday, trade liberalization, and poor patronage of made in Nigeria goods are factors affecting the growth of small and medium scale manufacturing businesses in Akwa Ibom State

The influence of finance and macroeconomic variables on manufacturing capacity utilization in Nigeria by Uchenna and Nwakoby (2015) from 1975 to 2012 using Johansen co-integration, error correction mechanism and variance decomposition technique. Employing secondary source of data and variables such as exchange rate, interest rate, inflation rate, external debt, terms of trade and openness, it was found that, the variables are co-integrated, that is, variables move in a long run. The speed of adjustment revealed that, long run disequilibrium are corrected at 6.5% yearly while the variance decomposition found that, the manufacturing capacity utilization are mostly driven by its own shocks. In addition, it was further revealed that, exchange rate, interest rate and terms of trade significantly contribute negatively to variations in manufacturing capacity utilization while inflation rate, external debt and trade openness also have insignificant negative effect on manufacturing capacity utilization in Nigeria

Effect of multiple taxation on investment in small and medium enterprises in Enugu state Nigeria was descriptively done by Okolo, Okaplaojiego and Okolo (2016) using survey design and ANOVA. Questionnaire was used as research instruments to gathered data from 80 selected small and medium scale owners. It was found that, multiple taxation has a negative effect on small and medium scale enterprises investment while the ability of small and medium scale enterprises to pay tax is significant with SMEs investment. The implication of this is that, despite the fact that small and medium scale enterprises have ability to pay taxes from their investment, multiple taxation from government affect their investment.

Effect of globalization on small scale enterprises performance in Nigeria was examined by Oladimeji, Edodaghe and Shobayo (2017) using annual time series data spanning from 1992 to 2014. Secondary sources of data were retrieved from CBN statistical Bulletin and Co-integration estimation technique was employed. Dependent variable was proxied by ratio of SMEs output to GDP out while independent variable was proxied by bank credit to SMEs, trade openness, interest rate. It was found that, that interest rate, bank credit and trade openness do not improve the performance of SMEs output

Impact of selected macroeconomic variables on export performance of Bangladesh was accessed by Rahman (2017) from 2011 to 2016 using multivariate Johansen cointegration technique, error correction mechanism and vector auto regression techniques. Time series data used were sourced from Central Bank of Bangladesh and publication of Bangladesh Bureau of Statistics. Dependent variable was proxied by export performance while independent variable was proxied by inflation, interest rate, exchange rate, money supply and industrial production. It was found that, there is a long run association among the variables. Error correction mechanism revealed that no short run relationship exist among the variables and variance decomposition error showed that, a significant proportion of the variability in the export performance was mainly due to its own innovations while only a minimal proportion was explained by the chosen variables. The direction of the effect showed that, inflation has a negative effect on export while exchange rate, interest rate, industrial production index and money supply have a positive effect on export performance.

Effect of international business on small and medium scale enterprises growth was investigated by Sanjo and Ibrahim (2017). It also looked at direction of causal relationship between international business and SMEs growth using both ordinary least squares (OLS) and granger causality estimation technique. Secondary sources of data from CBN annual reports and Nigeria annual abstract of statistics were used. Dependent variable was proxied SMEs growth while independent variable was proxied by exchange rate, foreign direct investment, and trade openness. It was revealed that international business has no significant effect on SMEs growth. This was explained by the results of each variable used which showed that, trade openness has insignificant positive effect on SMEs growth while foreign direct investment, exchange rate and interest rate have insignificant negative effect on SMEs growth in Nigeria

Likewise, effect of macroeconomic variables on economic growth was examined by Noreen (2018) from 1968 to 2017 using regression analysis. Secondary sources of data were sourced from World Bank and State Bank Pakistan. The variables used were inflation, interest rate, export and exchange rate and gross domestic product while the findings revealed that, while inflation has insignificant effect on economic growth, interest and exchange rate have significant effect on economic growth but inflation, exchange rate and interest rate have negative effect on economic growth but export has positive and significant impact on the growth of economy

III. Methodology

The study adopted Ex-post facto research design. And as such, secondary data were employed and sourced from Central Bank of Nigeria (CBN) statistical Bulletin of various editions covering the period 1999-2017. Time series data on small and medium scale enterprises GDP, exchange rate, inflation, interest rate, money supply, degree of openness over the study period (1999 to 2017) were obtained from CBN. The dependent variable is small and medium scale GDP. The explanatory variables are exchange rate, interest rate, inflation, degree of openness and money supply. However, before the estimation of the specified long-run growth model, the time series properties of the variables of interest were first explored to eliminate any trend element that could lead to spurious parameter estimates. In addition, to determine whether there exist any stable long-run relationships among the variables of interest, auto regressive distributed lag bound test was employed. To carry out the estimation procedure of the link between small and medium scale enterprises growth and its selected macroeconomic variables, based on theoretical and empirical review, annual time series data from the period 1999-2017 were used. An auto-regressive distributed lag analysis was used to analyze the data and to examine the major macroeconomic factors of small and medium scale enterprises growth in Nigeria.

3.1 Model Specification

The model adopted for this study was based on the statistical model of auto regressive distributed lag approach in line with that which was applied by Lucas (1988). The model specifies the economic growth function for Nigeria as follows: Real gross domestic product is a function of physical capital, labour force, and foreign direct investment, openness of the economy, inflation and government expenditure. It is precisely expressed in a functional form as follows:

$$RGDP = f(K, L, FDI, OPEN, INF, GE, MS)$$

This model portends that, real gross domestic product is a function of capital; labour, foreign direct investment, openness, inflation, government expenditure and money supply. However, this model was adapted by changing the real gross domestic product to small and medium scale enterprises growth while exchange rate and interest rate is also incorporated into the model to represent macroeconomics variables. Thus, the functional relationship of the model for this study is given below:

$$SMEG = f(EXR, INT, INF, DOP, MS) \dots\dots\dots 1$$

In a linear form, the model is stated thus:

$$SMEG_{it} = \beta_0 + \beta_1 EXR_{it} + \beta_2 INT_{it} + \beta_3 INF_{it} + \beta_4 DOP_{it} + \beta_5 MOS_{it} + \mu_{it} \dots\dots\dots 2$$

In order to bring all the variables into the same parenthesis, logarithm was introduced and the model states thus:

$$LSMEG_{it} = \beta_0 + \beta_1 LEXR_{it} + \beta_2 LINT_{it} + \beta_3 LINF_{it} + \beta_4 LDOP_{it} + \beta_5 LMOS_{it} + \mu_{it} \dots\dots\dots 3$$

Since the study employed auto regressive distributed lag bound testing, an auto-regressive distributed lag model was estimated, which is stated thus:

$$\Delta \ln SMEG_t = \beta_0 + \sum_{i=1}^n \beta_1 \Delta \ln SMEG_{t-1} + \sum_{i=0}^n \beta_2 \Delta \ln LEXR_{t-1} + \sum_{i=0}^n \beta_3 \Delta \ln LINT_{t-1} + \sum_{i=0}^n \beta_4 \Delta \ln LINF_{t-1} + \sum_{i=0}^n \beta_4 \Delta \ln LDOP + \sum_{i=0}^n \beta_5 \Delta \ln LMS_{t-1} + \beta_7 \ln SMEG_{t-1} + \beta_8 \ln LEXR_{t-1} + \beta_9 \ln LINT_{t-1} + \beta_{10} \ln INF_{t-1} + \beta_{11} \ln LDOP + \beta_{12} \ln LSM_{t-1} + \mu_t$$

Where, Δ is the difference operator, L is logarithm, SMEG=Small and medium scale gross domestic product, EXR= Exchange Rate, INT=Lending Rate, INF=Inflation, DOP=Degree of openness, MS=Money supply, μ = Stochastic Error Term, β_0 = Constant Term, $\beta_1 \beta_2 \beta_3 \beta_4 \beta_5$ = Parameters to be estimated.

IV. Results and Findings

4.1 Unit root test

The first step of analyzing the data employed is to test for stationarity of the variables. This is done using Phillips-Perron unit root test. The table below showed the PP statistics, critical value, level of differencing and probabilities of each variables. The null hypothesis stated that, there is unit root while the alternate hypothesis stated that, there is unit root. Hence, findings revealed that, variables employed are integrated of difference order, that having integration at level and at first difference. Inflation was stationary at level while small and medium scale enterprises growth, interest rate, exchange rate and money supply are not stationary at level but at first difference. Therefore, no unit root was rejected at level for inflation and at first difference for other variables. This implies that, series are stationary

4.2 Phillips-Perron Unit Root Test

Variables	Adj-t.Stat	Critical Values	Diff	P-Value
LSMG	-3.4381	-3.0521	I(1)	0.024
LEXR	-4.4532	-3.0655	I(1)	0.0036
INF	-4.6564	-3.0403	I(0)	0.002
INT	-7.7667	-3.0521	I(1)	0.000
LMS	-4.4321	-3.0521	I(1)	0.003

Source: Authors Computations from Eviews, 2019

4.3 Test of Heteroskedacity

Breusch-Pagan test was conducted to test for the normality of the variables employed so as to ascertain that the series of variables employed are free from heteroskedacity, which means residual has no constant variance. From the summary of table below, the F-statistic is 0.2000 while the p-value is 0.8232 which shows that the series is normally distributed and has no conditional heteroskedacity in the distribution of residual. The study, therefore, accepts the null hypothesis that the series are free from presence of heteroskedacity.

Table 2: Summary of Breusch Pagan Test for Heteroskedacity

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.200035	Prob. F(2,7)	0.8232
Obs*R-squared	0.919073	Prob. Chi-Square(2)	0.6316

Authors Computations from Eviews, 2019

4.4 Long run relationship among variables using ARDL Bound test

As a consequent of the Phillips-Perron test results above which revealed that variables were integrated of difference order, the study therefore employed Auto regressive distributed lag as estimation technique. ARDL test procedure provides valid results whether the variables are I(0) or I(1) or mutually co-integrated and provides very efficient and consistent test results in small and large sample sizes Pesaran, Shin & Smith, (2001). In checking for the long run relationship, ARDL bound test was employed. Given the few observations available for estimation, the maximum lag order for the various variables in the model is set at two (m=1) and the estimation is carried out for the period 1999-2017. The result is presented in table 3 below. From the above table, the F-statistic of the test is 4.4078. Comparing this to the critical value bounds significant level at 5%, it was revealed that, F-Statistics is greater than value at lower bound (2.62) and upper bound (3.79). This implies that variables move together in a long run. The study therefore concluded that, there is long run relationship among the variables employed.

Table 3 below: Summary of Auto Regressive Distributed Lag Bounds Test

Test Statistic	Value	k
F-statistic	4.407839	5
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.50%	2.96	4.18
1%	3.41	4.68

Source: Authors Computations from Eviews, 2019

4.5 Estimated Long Run Coefficients using the ARDL Approach

After the long run relationship has been established among the variables, the coefficients of each variable were therefore display in table 5. The results revealed that the estimated long run coefficients for inflation and money supply have an insignificant positive effect on SMEs growth while exchange rate, interest rate and degree of openness have a negative effect on SMEs growth. This implies that, a unit increase in

inflation and money supply improves the SMEs growth while units increase in exchange rate, interest rate and degree of openness affect the growth of SMEs growth in Nigeria.

The long run model corresponding to ARDL for natural log of gross domestic product (LGDP) can be written as;

$$\text{Cointeq} = \text{DLSMEG} - (-0.0006 \cdot \text{DEXR} - 0.0107 \cdot \text{DINT} - 0.0443 \cdot \text{DLDOP} + 0.2974 \cdot \text{DLMS} + 0.0143 \cdot \text{INF} - 0.0349)$$

However, the coefficient of determination revealed that, 68% variation in dependent variables is explained by the exogenous variables and this is confirmed by the adjusted R² which accounted for 0.44 that is 44%. This shows the true behaviour of all the variables employed in the model. The F-statistic of 2.8220 and P-value of 0.07 shows the overall insignificant of the variables in model at 5%. This implies that, although, these variables employed have a negative and positive effect on SMEs growth, but the effect are insignificant showing that, there are other macroeconomic variables that are of strong effect on the SMEs growth in Nigeria. The results of the Durbin Watson revealed that the series suffer not from serial correlation as it falls with the benchmark of 1.5 and 2.3. Hence, from the empirical results, a general inference is therefore made that, the selected macroeconomic variables employed have insignificant effect on SMEs growth in Nigeria.

Table 4: Summary of Estimated Long run coefficient of the variables using ARDL Approach ARDL (1,0,0,0,1) Model Dependent variable is DLSMEG

Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DEXR	-0.000643	0.001334	-0.482226	0.6412
DINT	-0.01071	0.010946	-0.978465	0.3534
DLDOP	-0.044293	0.061166	-0.724153	0.4874
DLMS	0.297391	0.162434	1.830841	0.1004
INF	0.014349	0.007667	1.871354	0.0941
C	-0.034868	0.100062	-0.348461	0.7355
R-squared	0.687004	Mean dependent var		0.189922
Adjusted R-squared	0.443562	S.D. dependent var		0.09763
S.E. of regression	0.072827	Akaike info criterion		-2.09627
Sum squared resid	0.047734	Schwarz criterion		-1.70417
Log likelihood	25.81832	Hannan-Quinn criter.		-2.0573
F-statistic	2.822045	Durbin-Watson stat		2.140732
Prob(F-statistic)	0.074826			

Source: Authors Computations from Eviews, 2019

V. Discussion of Findings

The study examined the effects of macroeconomic variables such as exchange rate, inflation, interest rate, degree of openness and money supply on the small and medium scale enterprises by employing autoregressive distributed lag on the annual times series spanning from 1999 to 2017, a period of democracy in Nigeria. The findings of the results was in line with any studies in the subject matter confirming the implication of macroeconomic instability on the small and medium scale enterprises growth. It was found that, money supply and inflation rate exert an insignificant positive effect on SMEs growth while interest rate, exchange rate and degree of openness had an insignificant negative effect on small and medium scale enterprises growth. The implication of this is that, continuous increase in interest rate, degree of openness and exchange rate decreases the growth of SMEs. The reason is that, small and medium scale are still fragile and still at a birth stage in Nigeria, hence variability in exchange rate will hurt its growth. Interest rate is the cost of accessing finance and when this is expensive, it will discourage borrowing by the investors in the sector because, high interest rate takes chunk part of the profits of these enterprises, and to solve this, most of them prefer to obtain finance from informal sources. On degree of openness, this supposed to enhance the growth of the sector but due to the nature of most developing countries, in which their products could hardly compete favorably with other product imported into the country, this will end up sending these businesses packing because, most of the product produced by these are less patronized thereby affecting their growth. On the other hand, expansion in money supply makes access to finance easy and less costly because at this period, the central bank is pursuing an

expansionary monetary policy. Hence, finance will be cheaper to access. As the enterprises need finance for the operations of their business, it will end up improving it and lastly, inflation causes prices of goods and services to be expensive and unaffordable to consumers however, a threshold of inflation is needed for growth. Having a positive effect on SMEs growth is an indication that, inflation in Nigeria is within the threshold that could spur growth in the sector. This position and the empirical findings is in line with Essien(2014), Uchenna and Nwakoby(2015), Antwi et al (2015)Oladimeji et al (2017), Sanjo, and Ibrahim(2017), Noreen(2018) as they all found that, macroeconomic variables such as interest rate, exchange rate, degree of openness, inflation, foreign direct investment have a negative effect on SMEs growth, export performance, economic growth, manufacturing growth. The beauty of these findings is that, macroeconomic variables on different aspect of growth exert negative effect on them which confirms that, dwindling of growth in an economics most especially in a developing countries are majorly caused by macroeconomics instability and this is in line with cause and effect theory employed by this study. The findings of this study also are in line with Eravwoke and Onyivwi (2012) Antwi (2015) Rahman (2017) as they also found that long run relationship exist between macroeconomics variables and growth.

VI. Conclusion and recommendations

Having examined the effect of macroeconomics variables on SMEs growth, it was therefore concluded that, the effect of these variables are heterogeneous in nature and it depends on the level of instability found in an economy. Summarily, the joint effect of the macroeconomics variables employed in this study revealed an insignificant effect on SMEs growth, therefore, there are other macroeconomic variables not employed in this work that may explain significant effect on SMEs growth in Nigeria. the study recommends that, efficient implementation of macroeconomic policies such as monetary policy and fiscal policy should be uphold and the interest of small and medium scale enterprises should be at the centre so as to spur growth in the sector because continuous increase in the growth and performance of this sector will proffer a lasting and sustainable solution to some of the socio economic problems facing this country.

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