Impact of Monetary Policy on the Growth of Small and Medium Scale Enterprises in Nigeria

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Abstract

This study examines the impact of monetary policy on the growth of SMEs in Nigeria from 1986 to 2020. Data used for this study was sourced from Central Bank of Nigeria (CBN) 2020 statistical bulletin, SMEDAN and bureau of statistics. SMEs outputs was used as dependent variable, while the monetary policy variables such as interest rate, inflation, money supply and exchange rate were used as the independent variables. The unit root pre-diagnostics test was run on all the variables in order to ascertain the order of integration, all variables were found to be stationary at first difference 1(1) except SMEs OPT which was found to be stationary at level 1(0). Therefore, this justifies the adoption of the Autoregressive Distributed lag (ARDL) method of analysis. The result of the findings revealed that the independent variables interest rate and inflation have a negative relationship with the dependent variable SMEs Outputs and were found to be statistically insignificant at 5% level of significance, furthermore, exchange rate and broad money supply were positively related to SMEs outputs, but broad money supply was statistically significant with a P-value less than 5% level of significance (0.0393<0.05). The error correction model (ECM) stood at 0.66 showing 66% speed of adjustment to the long run equilibrium. The regression results show R-squared to be 0.925802 and adjusted R-squared to be 0.682008 which shows an excellent goodness of fit, that is, 92% variation of SMEs output was accounted for by joint variation of a combination of the independent variables. The study recommended that commercial banks through the directive of the CBN, make loanable funds available for SMEs at low interest rate in order to create an inducement for SMEs to borrow and monetary policies should be consistent and effectively implemented by controlling the inflationary rate and Exchange rate stability.

Keywords: Monetary Policy, Small and Medium Scale Enterprises, ARDL and Nigeria.

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Background to the Study

Small and medium scale enterprises play a vital role on the economic development of Nigeria, SMEs also plays a significant role in economic transformation and diversification, it has the potential of contributing to employment generation for youth and the less educated, and also to the improvement of income distribution, poverty alleviation, rural social and economic development. Promotion of indigenous entrepreneurship and production of primary goods to strengthen industrial linkages, hence strengthening the trade flows in Nigeria. The sector has played a significant role in the nation's economy as it is responsible for about 70% of the total industrial employment in the country between 10-15% of the total manufacturing outputs (Brunus, 2017). For the nation to have a sustainable growth and development there must be the need to have a stable and favorable monetary policy that will enhance and accelerate the growth of SMEs in Nigeria.

Monetary policy as the name implies is one of the major economic stabilization tools which involves measures designed to regulate and control the volume, cost, availability and direction of money and credit in an economy to achieve some specific macro-economic policy objectives. Monetary policy is one of the principal economic management tools that governments use to shape economic performance. According to Onuorah and Chigbu (2012), monetary policy in the Nigerian context refers to the actions of the Central Bank of Nigeria to regulate the money supply, so as to achieve the ultimate macroeconomic objectives of government. The specific objective of monetary policy may change from time to time, depending on the level of economic development and economic fortunes of the country. In the pursuit of monetary policy situation of Nigeria, two phases were evident, that is before 1986 and since 1986. The first phase placed emphasis on direct monetary controls, while the second reflects the transition to market mechanisms. The economic environment that guided monetary policy before 1986 was characterized by the dominance of the oil sector, the expanding role of the public sector in the economy and over dependence on the external sector. In order to maintain price stability and a healthy balance of payment position, monetary management depended on the use of direct monetary instrument such as credit ceilings, selective credit controls, administered interest rate and exchange rate, as well as the prescription of cash reserve requirements and special deposits (Ojo, 1998)

Small and medium scale are facing a lot of challenges despite government effort to revive the SMEs, most of the challenges faced by the SMEs are difficulty of gaining access to bank credit due to high interest rate, unstable exchange rate, high inflation, insecurity in some part of the country, inadequate infrastructural facilities, under capitalization and corruption. There is an urgent need to provide the enabling environment for the growth of SMEs, so that they could adequately play the role expected of them in economic transformation and diversification (Likita, Idisi and Sidi, 2018).

The need to realize the potentials of the SME's sub-sector in Nigeria over the years, has been largely guided and influenced by monetary policy management. The absence of consistent monetary policies creates an atmosphere of uncertainty, thus making it difficult for SMEs to operate effectively. It therefore becomes necessary to highlight the monetary policy in Nigeria.
and examine the extent to which it has supported the growth of SMEs in the economy; consequently, seeking answers to this question becomes pertinent: To what extent has monetary policy impact the growth of SMEs in Nigeria? What are the challenges to monetary policy implementation in Nigeria? How has the monetary policy variables help in the growth of SMEs? Hence the need for this study which examines the impact of monetary policy on the growth of SMEs in Nigeria. Other specific objectives include: To determine the impact of Interest rate on the growth of SMEs. To ascertain the impact of inflation rate on the growth of SMEs. To examine the impact of exchange rate on the growth of SMEs. To investigate the impact of broad money supply on SMEs in Nigeria.

**Study Hypotheses**

In line with the objectives the following hypotheses, are formulated in a null form, they are:

- **H1**: Interest rate has no significant impact on small and medium scale enterprise in Nigeria.
- **H2**: Inflation has no significant impact on the growth of SMEs in Nigeria.
- **H3**: Exchange rate has no significant impact on the growth of SMEs in Nigeria.
- **H4**: There is no significant impact of Broad money supply on SMEs in Nigeria.

**Literature Review**

**Concept of monetary policy**

Monetary policy is one of the key economic policy instruments that governments use to control private sector activities. According to Ekpo (2014), Monetary policy is concerned with the availability, cost and direction of credit in the economy. It involves changing the volume of money supply (increasing or decreasing) from time to time with the expectation that such changes will influence total spending and aggregate demand in the economy thereby promote stable prices, stimulate investment, output and employment and support the external equilibrium. The primary objectives of monetary policy is to ensure that over time, the expansion in money and credit will be adequate for the long-term need for the growing economy at stable prices, in the short run other objectives include combating inflationary pressures, restoring and sustaining balance of payments, maintaining a stable exchange rate at internationally competitive level and ensuring stability in the money market. Monetary policy also aimed at removing obstacles to the growth of savings and efficient allocation for investment. Monetary policy had been defined as a deliberate action of the monetary authorities to influence the quantity, cost and availability of money credit in order to achieve certain macroeconomic objectives of internal and external balances (Nnanna, 2001).

According to CBN (2006), monetary policy concept was defined as “Any policy measure designed by the federal government through the CBN to control cost availability and supply of credit, so as to regulate the money supply and interest rate by the CBN in order to control inflation and to stabilize the currency flow in an economy. Therefore, in order to achieve this predetermined economic goal the CBN embarks on monetary control. In doing this, it classifies money into Narrow Money (M1) and Broad Money (M2). M1 is made up of currency in circulation with the non-bank public; and demand deposits (current accounts in
the banks). This category of money represents money used for daily transactions and short term monetary needs. The M2 (broad money) consists of narrow money and savings as well as time deposits (that is, call money). It also includes foreign currency-denominated deposits. This categorization measures the total volume of money in supply in the economy. It is via the broad money that liquidity and inflation issues are tackled by the CBN (Udoh, Gbande and Ikechukwu 2018).

Fundamentally, monetary policy attempts to maintain a balance as much as is feasible, between the supply and demand for the monetary assets of a specific economic system, the underlying purpose being to achieve adequate and stable economic growth. For a developing country like Nigeria, this may translate into any or a combination of price stability, high level of employment or an acceptable rate of unemployment, a sustainable growth rate over the long term as well as balance of payments equilibrium.

Concept of Small and medium scale enterprises
The definition of small and medium scale enterprises varies from regions, country to countries, this can be determined essentially based on the role of SME in the economy, policies and programmes designed by particular agencies or institutions empowered to develop SME. For instance, a small business in the developed economies of countries like United Kingdom, Russia and United States of America (USA), maybe a medium or large-scaled business in a developing economy like Nigeria and Ghana. Moreover, the definition of SME also varies overtime from agencies or developing institutions to another, depending on their policy focus (Julius, Agbolade, and Johnson, 2016). The World Bank's definition includes businesses three times larger by employees and five times larger by turnover or assets than the largest SME under the Multilateral Investment Fund (MIF) definition. At the same time, the average gross national income per capita (PC-GNI) of the developing member countries of the World Bank Group is significantly less than the average PC-GNI for the countries of Latin America and the Caribbean served by the MIF (World bank, 2012).

However, in Nigeria the introduction of the National Policy on MSMEs has addressed the issue of definition as to what constitutes micro, small and medium enterprises. The definition adopts a classification based on dual criteria, employment and assets (excluding land and buildings) Size Category Employment Assets (N Million) (land and buildings) Micro enterprises employ Less than 10 employees and having asset less than 5 million. Small enterprises 10 to 49 employees and having 5 to less than 50 million, while Medium enterprises has 50 to 199 employee 50 to less than 500 million (National policy on MSMEs, 2012). Likita, Idisi and Sidi (2018) Opined that SMEs, are not limited to any particular type of industry or services, and can include small manufacturing facilities, small processing units, small scale farmers, Trading companies, export-import companies distribution, retailing, rental Services Company, mining etc. The most valid measures for defining SME are number of employees and size. From the above concept it is evidence that growth, size of business, ownership and number of employee is an important phenomenon in determining SMEs. It is a fact that their survival basically depends on their power to participate in the market with other big companies.
Theoretical Framework

Monetarism theory

The theoretical base found suitable for this study is the monetarism theory, whose proponent is Milton Friedman (1951). Monetary theory posits that a change in money supply is the main driver of economic activity. Apparently, Udoh, Gbande and Ikechukwu (2018), affirm that this school of economic thought monetarism, maintains that the money supply (the total amount of money in an economy) is the chief determinant of current dollar GDP in the short run and the price level over longer periods. In fact, changes in money supply is the main driver of economic activity. Since the monetarists believe that the market function relatively well as a central coordinating mechanism and certainly better than does the government (Anyanwu and Oaikhenan 1995). It argues that central banks, which control the levels of monetary policy, can exert much power over economic growth rates by tinkering with the amount of currency and other liquid instruments circulating in a country's economy. Monetarist believes that the aim of monetary policy are best met by targeting the changes in money supply which are the most significant determinants of the rate of economic growth. Furthermore, monetary theory suggest that if a nation's supply of money accelerate, economic activity will definitely rise, too, and vice versa. A simple illustration is given by the formula governs monetary theory as: \( MV = PQ \cdot M \)

Where: 
\[ M \] represent money supply,
\[ V \] Velocity (number of times per year the average Naira is spent),
\[ P \] Is the price of goods and services, and
\[ Q \] Is the number of goods and services.

Assuming constant \( V \), when \( M \) is increased, either \( P \), \( Q \), or both \( P \) and \( Q \) rise.

Empirical Review

Many researchers both within and outside Nigeria, have studied monetary policy on small and medium enterprises and their relationship with other economic variables.

Alabi, David and Aderinto (2019), on their study on the impact of government policies on business growth of SMEs in South Western Nigeria, six states in the geo political zone were used. The study adopted the descriptive ex-post facto type and used both primary and secondary data and likewise adopted the stratified sampling technique for determination of exact sample population to use for the study. Questionnaire were used as a tool for data collection. SPSS package was used to analyze the data obtained from the respondent. The result revealed that there exist a significant relationship between government policy and business growth of SMEs in southern Nigeria. The study recommends amongst others that the country's monetary policy and macroeconomic indicators ought to be modified to become more suitable for SMEs operating in the country.

Discussing the impact of monetary policy on private sector investment, Kahn (2010), observed that monetary policy objectives are concerned with the management of monetary policy targets which are price stability, promotion of growth, achieving full employment, smoothing the business cycle, preventing financial crises, stabilizing long-term interest rates.
and the real exchange rate. Nwoke, Ihemeje and Anumadu (2016), pointed out that one of the major objectives of monetary policy in Nigeria is stabilization of economic growth through investment. The Nigerian government has adopted various monetary policies through the Central Bank of Nigeria over the years to achieve economic growth.

Fu and Liu (2015), examined the monetary policy effects on corporate investment adjustment, using a sample of China’s A-share listed firms within the period 2005 and 2012. The results revealed that corporate investment adjustment is faster in expansionary than contractionary monetary policy periods. The study also showed that an increase in the growth rate of money supply or credit accelerates adjustment. The monetary channel was also found to have significant asymmetry, whereas the Credit channel has none. The study recommends that monetary authorities should pay attention to the effect of monetary policy on the adjustment of corporate investment. Expansionary monetary policy more effectively adjusts corporate investment than tightening policy.

Udoh, Gbande and Ikechukwu (2018), investigate the monetary policy and growth of Small and medium enterprises in Nigeria from 1986 to 2016. The research design adopted for the study is ex-post facto research design, the Error Correction Model (ECM) was used to analyze the secondary time series data whereas the Johansen Co-integration was adopted to test for the long run relationship among the series. The findings shows that there is a slight significant effect between interest rate (INT) and growth of SMEs in Nigeria. But no significant effect between exchange rate and inflation on the growth of SMEs in Nigeria. The study therefore, recommends that monetary policy should be set in such a way that the objective it wants to achieve is clearly and transparently defined in response to the dynamic of the domestic and global economic development for the growth of SMEs in Nigeria. In the same vain Atarere, (2016), investigate the influence of monetary policies on the growth of small and medium scale enterprises in Nigeria. The study hinged on monetary policy as the predetermined action of the controller of economy to impact the volume and cost of money toward accomplishment of macroeconomic objectives, though the study focused on growth of SMEs, which was okay but did not explain in-depth on how the findings was arrived at, tools of analysis used and these makes the study theoretical in nature and a bit confusing.

After the empirical review has been made on related studies, this research work will fill the research gap by analyzing monetary policy variables (Interest rate, exchange rate, inflation and broad money supply) against the level of SMEs growth and its contribution to the Nigeria economy. Hence, making use of Auto-regressive distributed lag model (ARDL) to analyze the secondary time series data spanning the period 1986 to 2020.

**Methodology and Model Specification**

To test the null hypotheses, this paper used secondary data and employed annual time series data for the period 1986 to 2020 collated from SMEDAN, Central Bank of Nigeria (CBN) Statistical Bulletin and Bureau of Statistics.
The annualized time series data will be analyzed using the Auto-regressive distributed lag model (ARDL), whereas the Bounds co-integration approach will be employed to test for the long-run relationship among the series. The reason for the choice of ARDL is influenced by its advantageous position over other estimation techniques like the Granger causality, Engle and Granger (1987), Johansen (1991), Johansen and Juselius (1990) and Gregory and Hansen (1996) which often require that the variables are of the same order of integration, besides their preference for large data size for validity of results to hold (Babajide, Lawal and Somoye, 2016).

**Model Specification**
ARDL yields valid results regardless of whether the underlying variables are I(1) or I(0). More so, a distributed lag model is used to predict current values of dependent variable (SMEsOPT) based on both the current values of an explanatory variable (INTR, INF, EXR and BMS) and the lagged (past period) values of these explanatory variables, therefore in a more explicit form, the model can be written in a log-linear form to transform the variables into the same unit and base. Thus, the ARDL model can be expressed as:

\[
\log \text{SMEsOPT}_t = \beta_0 + \sum_{j=0}^{q} \beta_j \log \text{ITR}_{t-j} + \sum_{k=0}^{p} \beta_k \log \text{IFR}_{t-k} + \sum_{l=0}^{s} \beta_l \log \text{EXR}_{t-l} + \sum_{m=0}^{r} \beta_m \log \text{BMS}_{t-m} + \epsilon_t
\]

Where;
- \( \log \) = Logarithm
- \( \text{SMEsOPT}_t \) = Small and Medium Scale Enterprise Output at time \( t \)
- \( \text{SMEsOPT}_{t-1} \) = Small and Medium Scale Enterprise Output at time \( t-1 \)
- \( \text{ITR}_{t-1} \) = Interest rate at time \( t-1 \)
- \( \text{IFR}_{t-1} \) = Inflation rate at time \( t-1 \)
- \( \text{EXR}_{t-1} \) = Exchange rate at time \( t-1 \)
- \( \text{BMS}_{t-1} \) = Broad money supply at time \( t-1 \)
- \( \epsilon_t \) = error term at time \( t \)
- \( p, q, r, s, t \) = total number of estimated coefficients (i.e. \( p = \text{SMEsOPT}, q = \text{ITR} \))
- \( I=0, j=0, k=0, l=0, m=0 \) are the minimum sample size for which the model can be fit.
- \( \beta_0 \) = intercept while \( \beta_1, \beta_2, \beta_3 \) and \( \beta_4 \) are the parameters.

**Apriori Expectation of the Model**
The a priori expectation is a theoretical statement set by economic theory. For this study, the parameter estimates of the model will be checked to find out whether they conform to the postulations of economic theory or not.
The ADF test indicates that four of the variables (ITR, IFR, EXR and BMS) were found to be stationary at first difference and at 5% level of significance because their P-values were below the 0.05 respectively. Hence, the unit roots for ADF test were rejected at the first difference for the four variables. However, SMEsOPT was found stationary at levels and at 5 percent level of significance. Since they were all found stationary at different orders, they satisfy the condition for using ARDL and Bounds cointegration test.

**Table 1:** Summary of the Apriori Expectation

<table>
<thead>
<tr>
<th>Regressand</th>
<th>Relationship</th>
<th>Regressors</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMEsOPT</td>
<td>-</td>
<td>INT</td>
</tr>
<tr>
<td>SMEsOPT</td>
<td>+</td>
<td>EXR</td>
</tr>
<tr>
<td>SMEsOPT</td>
<td>-</td>
<td>INFR</td>
</tr>
<tr>
<td>SMEsOPT</td>
<td>+</td>
<td>BMS</td>
</tr>
</tbody>
</table>

Analysis and Discussion of Findings

Unit Root test was conducted using Augmented Dickey – Fuller (ADF) technique to ascertain the stationary status of the variables and to ensure that the data for the variables used in the model is trendy. Running regression with non-stationary data series produces spurious results that may not be reliable.

Results of the unit root tests are presented in table 2:

**Table 2:** Summary of Unit Root Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF Statistics</th>
<th>P.Value</th>
<th>5% Order of Integration</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMEsOPT</td>
<td>-3.168351</td>
<td>0.0309</td>
<td>-2.951125</td>
<td>1(0)</td>
</tr>
<tr>
<td>ITR</td>
<td>-3.100546</td>
<td>0.0380</td>
<td>-2.971853</td>
<td>1(1)</td>
</tr>
<tr>
<td>IFR</td>
<td>-7.421019</td>
<td>0.0000</td>
<td>-2.954021</td>
<td>1(1)</td>
</tr>
<tr>
<td>EXR</td>
<td>-4.840104</td>
<td>0.0004</td>
<td>-2.954021</td>
<td>1(1)</td>
</tr>
<tr>
<td>BMS</td>
<td>-4.993224</td>
<td>0.0003</td>
<td>-2.954021</td>
<td>1(1)</td>
</tr>
</tbody>
</table>

**Source:** Authors Compilation (2021), E-views 10

The ADF test indicates that four of the variables (ITR, IFR, EXR and BMS) were found to be stationary at first difference and at 5% level of significance because their P-values were below the 0.05 respectively. Hence, the unit roots for ADF test were rejected at the first difference for the four variables. However, SMEsOPT was found stationary at levels and at 5 percent level of significance. Since they were all found stationary at different orders, they satisfy the condition for using ARDL and Bounds cointegration test.

Cointegration Test

**Table 3:** Summary of Co-integration Estimates

<table>
<thead>
<tr>
<th>F-Bounds Test</th>
<th>Null Hypothesis: No levels relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Statistic</td>
<td>Value</td>
</tr>
<tr>
<td>F-statistic</td>
<td>7.327703</td>
</tr>
<tr>
<td>K</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Authors Compilation (2021), E-views 10
Table 3 shows the result of the Bound test for co-integration for all the variables based on the result the F-statistics value of 7.327703 is greater than the chosen upper bound 1(1) and lower bound 1(0) at 5% level of significance (3.49) and (2.56) respectively, this indicates the presence of co-integration and long run relationship in the model; therefore, rejecting the null hypothesis which means that there is a long run relationship in the model.

**Table 4: ARDL Error Correction Regression**

| Source: Authors computation (2021) Using E-views 10 |

| Dependent Variable: D(LSMESOPT) |
| Case 2: Restricted Constant and No Trend |
| Date: 09/16/21 Time: 14:43 |
| Sample: 1986 2020 |
| Included observations: 31 |

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(LSMESOPT(-3))</td>
<td>0.313136</td>
<td>0.127485</td>
<td>2.456254</td>
<td>0.0437</td>
</tr>
<tr>
<td>D(LITR(-3))</td>
<td>-0.476635</td>
<td>0.378268</td>
<td>-1.260045</td>
<td>0.2480</td>
</tr>
<tr>
<td>D(LIFR(-3))</td>
<td>-2.740649</td>
<td>1.532632</td>
<td>-1.788197</td>
<td>0.1169</td>
</tr>
<tr>
<td>D(LEXR(-2))</td>
<td>2.988400</td>
<td>1.499516</td>
<td>1.992910</td>
<td>0.0865</td>
</tr>
<tr>
<td>D(LBMS(-3))</td>
<td>3.487931</td>
<td>1.379250</td>
<td>2.528860</td>
<td>0.0393</td>
</tr>
<tr>
<td>ECM(-1)*</td>
<td>-0.662544</td>
<td>0.485472</td>
<td>-5.585426</td>
<td>0.0008</td>
</tr>
</tbody>
</table>

R-squared 0.925802 Mean dependent var 13.093000
Adjusted R-squared 0.682008 S.D. dependent var 2.108144
S.E. of regression 1.188798 Akaike info criterion 3.244073
Sum squared resid 9.892688 Schwarz criterion 4.354257
Log likelihood -26.28313 Hannan-Quinn criter. 3.605965
F-statistic 3.797481 Durbin-Watson stat 2.759142
Prob(F-statistic) 0.037925

**Source:** Authors computation (2021) Using E-views 10

The Error Correction Model (ECM) is expected to meet three criteria, it must be negative, less than one and significant. As expected, the lagged error correction term is negative, less than unity and statistically significant at 5%. The coefficient of (-0.66) revealed that once there is disequilibrium in the system, it takes an average speed of 66% to adjust itself back towards long-run equilibrium level. The coefficient of determination R-square stood at 0.925802, which shows all goodness of fit of the estimated model and likewise indicates that 92.25% of the variables of SMEsOPT was accounted by joint variation of a combination of the independent variables, while 7.75% unaccounted variations was captured by the error term. It showed that monetary policy has an impact prediction on SMEs growth in Nigeria within the period under review.
Statistical Test of Hypotheses
The four hypotheses formulated in this study were tested using Wald test and the associated p-value. The decision rule for accepting or rejecting the null hypothesis was based on the Probability Value (PV). If the PV is less than 5% or 0.05 (that is, PV < 0.05), it implies that the regressor in question is statistically significant at 5% level; otherwise, it is not significant at that level.

$H_{01}$: Interest rate has no significant impact on small and medium scale enterprises in Nigeria.

Table 5: Results of Wald Test of interest rate (INR) and small and medium scale enterprises growth in Nigeria

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>Value</th>
<th>Df</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>1.253662</td>
<td>(4, 7)</td>
<td>0.3715</td>
</tr>
<tr>
<td>Chi-square</td>
<td>5.014648</td>
<td>4</td>
<td>0.2858</td>
</tr>
</tbody>
</table>

Source: Authors Computation, 2021 (Eviews-10)

The Wald-test in Table 4 indicated that the calculated F-value for interest rate is 1.25 and its probability value is 0.3715. Since the probability value is greater than 0.05 at 5% level of significance, it thus falls in the acceptance region and hence, the first null hypothesis ($H_{01}$) was accepted. The result thus shows that interest rate (INR) has no significant impact on SMEs growth in Nigeria.

$H_{02}$: Inflation rate has no significant impact on the growth of small and medium scale enterprises in Nigeria

Table 6: Results of Wald Test of Inflation rate(IFT) and growth of SMEs in Nigeria.

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>Value</th>
<th>df</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>4.275273</td>
<td>(4, 7)</td>
<td>0.0460</td>
</tr>
<tr>
<td>Chi-square</td>
<td>17.10109</td>
<td>4</td>
<td>0.0018</td>
</tr>
</tbody>
</table>

Source: Authors Computation, 2021 (Eviews-10)

The Wald-test in Table 6 indicated that the calculated F-value for inflation rate is 4.27 and its probability value is 0.0460. Since the probability value is less than 0.05 at 5% level of significance, it thus falls in the rejection region and hence, the second null hypothesis ($H_{02}$) was rejected. The result thus shows that inflation rate has a significant impact on the growth of small and medium scale enterprises in Nigeria.

$H_{03}$: Exchange rate has no significant impact on the growth of SMEs in Nigeria.
The Wald-test in Table 7 indicated that the calculated F-value for exchange rate is 3.52 and its probability value is 0.0771. Since the probability value is greater than 0.05 at 5% level of significance, it thus falls in the acceptance region and hence, the third null hypothesis \( H_3 \) was accepted. The result thus shows that Exchange rate (EXT) has no significant impact on growth of SMEs in Nigeria.

\[ H_3: \text{There is no significant impact of broad money supply on SMEs in Nigeria.} \]

### Table 7: Results of Wald Test of Exchange rate (EXT) and growth of SMEs in Nigeria

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>Value</th>
<th>df</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>3.523430</td>
<td>(3, 7)</td>
<td>0.0771</td>
</tr>
<tr>
<td>Chi-square</td>
<td>10.57029</td>
<td>3</td>
<td>0.0143</td>
</tr>
</tbody>
</table>

**Source:** Authors Computation, 2021 (Eviews-10)

The Wald-test in Table 8 indicated that the calculated F-value for broad money supply was found to be 1.90 and its probability value is 0.2147. Since the probability value is greater than 0.05 or 5% level of significance, which fell in the acceptance region and hence, we accepted the fourth null hypothesis \( H_4 \) and conclude that there is no significant impact of broad money supply (BMS) on small and medium scale enterprise growth in Nigeria.

\[ H_4: \text{There is no significant impact of broad money supply on SMEs in Nigeria.} \]

### Table 8: Results of Wald Test Broad money supply (BMS) and SMEs growth in Nigeria.

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>Value</th>
<th>Df</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>1.903534</td>
<td>(4, 7)</td>
<td>0.2147</td>
</tr>
<tr>
<td>Chi-square</td>
<td>7.614138</td>
<td>4</td>
<td>0.1068</td>
</tr>
</tbody>
</table>

**Source:** Authors Computation, 2021 (Eviews-10)
Figure 1: Stability Test.

For stability, it is important that the residuals and the cumulative sum of the squares stay within the 5 percent critical bound (represented by two straight lines). The residual in the model stay within the two lines from 2014 to 2020. The parameters are adjudged to be stable within that year indicated by the graph.

Discussion of the Findings
Findings from the study revealed that Interest rate and Inflation were found to have a negative relationship with SMEs growth (ITR-0.476635 and IFL-2.740649) this conform to our apriori expectation, and having a p-value of 0.2480 and 0.1169 respectively which is greater than the level of significance of 5% shows that it is statistically insignificant. The insignificance of the INT is attributed to the unstable macroeconomic policies, inadequate infrastructural facilities, this is in contrast to the study by Udoh, Gbande and Ikechukwu (2018), in their study on monetary policy and growth of SMEs in Nigeria, interest rate has a slightly significant effect on the growth of SMEs. Similarly, going by this present study inflation was also insignificant to SMEs growth this is due to the rising inflationary trend which have a huge damping impact on SMEs growth, which is due to rising cost of production as a result of hike in prices of items. Exchange rate and broad money supply were both found to have a positive relationship with SMEs growth in Nigeria with value of 2.988400 and 3.48731 respectively this agreed with our apriori expectation, exchange rate was found to be statistically insignificant with p-value of 0.8650 which is greater than 5% level of significant this is due to the fact that frequent depreciation of the naira due to fluctuation in exchange rate had adverse effects on SMEs growth in Nigeria this is commensurate with the study by Udo, Gbande and Ikechukwu (2018). While broad money supply on the other hand was found to be statistically significant with a p-value of 0.0393 which is less than 0.05 level of significance. Increase in money supply in the economy swells the reserve of banks, thereby enabling them to provide credit facilities to the SMEs.
The value of R-squared 0.925802 shows all goodness of fit of the model this implies that 92% of the variables of SMEs outputs was accounted for by joint variation of a combination of the independent variables also adjusted R-squared 0.682008 depicts an overall goodness of fit of the model which was corrected and has a good fit. This is supported by the value of F-statistics 3.797481 with a p-value of 0.037975.

**Conclusion and Recommendations**

Having examined the impact of monetary policy on the growth of small and medium scale enterprises in Nigeria, the results have shown that major determinants of SMEs growth are monetary policies directed on interest rate stabilization, inflations rate targeting. Exchange rates management and money supply. The implication is that the interplay of these variables is important to keep SMEs alive in Nigeria. There is need to create an effective monetary policies which will be set in such a way that the objective it wants to achieve is clearly and transparently defined in response to the dynamics of the domestic and external economic developments and creating an enabling environment for the country to achieve its full potential in terms of growth by generating the required level of investment. Based on the empirical findings of this study, and in line with the above conclusions the following recommendations are put forward for policy action.

1. Commercial banks through the directive of the CBN, make loanable funds available for SMEs at low interest rate in order to create an inducement for SMEs to borrow, perhaps high interest rate has the tendency of making these SMEs to collapse within a short period of time thereby discouraging prospective investors from borrowing.
2. The Monetary policies should be consistent and effectively implemented by curbing the inflationary pressure, and ensure to control the constant fluctuation of domestic price levels so as to avoid rising cost of SMEs production.
3. Lastly, government should make effort to drastically reduce the uncertainty i.e incessant insecurity, and enact a favourable monetary policies geared toward maintaining a stable exchange rate at internationally competitive level and ensuring stability in the money market thereby enabling the SMEs to operate effectively in the economy.
References


Ebare, K., (2018). Impact of monetary policy on small and medium scale enterprises financing in Nigeria: *Center for research on Islamic Banking & finance and Business. U.S.A.*


