Small and Medium Scale Enterprises (SMEs) and Economic Growth in Nigeria

Abstract: This study examined the effect of Small and Medium Scale Enterprises (SMEs) on economic growth in Nigeria using data between 1986 and 2018. Vector Autoregression (VAR) technique was employed in analysing the data collected. The results of the estimation indicated that SMEs output growth rate has a significant positive effect on gross domestic product (GDP) growth rate (a proxy for economic growth). Furthermore, it was found that SMEs contribute 61% of the growth in GDP. Thus, the study concluded that economic growth in Nigeria is driven by SMEs. The study recommended that the Central Bank of Nigeria should ensure that SMEs have increased access to funding at a reduced cost to boost their growth. Also, the federal as well as state governments in Nigeria should ensure that the economy is business/investment friendly for SMEs by adjusting key economic policies such as reduction in tax rate/granting of tax waivers, provision of incentives/grants to SMEs in their domain to help them grow. The aforementioned recommendations are necessary because the growth of SMEs triggers the growth of the economy.

Keywords: SMEs, Economic Growth, Vector Autoregression, Nigeria.

INTRODUCTION

Small and Medium Enterprises (SMEs) form the very base upon which the big business organizations are built (Onakoya, Fasanya and Abdulrahman, 2013). They have proved to be a major tool adopted by the developed nations to attain socio-economic development (Olaye, Adedeji and Ayeni-Agbaje, 2018). However, the main constraints of SMEs in developing economies like Nigeria are financing (inadequate access to funding) and high tax rate. In an attempt to reduce their risk portfolio, deposit money banks (commercial banks) lend less to SMEs as most of the small and medium businesses do not demonstrate high profitability prospects, especially in the early years of their operations (Ilegbinosa and Jumbo, 2015). Thus, SMEs mostly depend on the owners’ personal savings, assistance from friends and family members, and retained earnings of the business to meet the financial requirements of their enterprises. Also, federal and state governments, in an attempt to raise revenue increase taxes on businesses in their domain. As such, some SMEs relocate to other places with lower tax rate, while others with no choice of relocation face the high tax rate which inhibits their growth. Therefore, the financing constriction and high tax rate faced by SMEs questions their ability to contribute positively and significantly to economic growth in Nigeria. As such, this study examined the effect of small and medium scale enterprises on economic growth in Nigeria. The hypothesis of the study is stated in its null form in this section as follows:

$H_0$: Small and medium scale enterprises (SMEs) output growth rate has no significant effect on gross domestic product (GDP) growth rate.

The hypothesis will be tested in the course of the study. The study covered the period spanning 1986 to 2018. The base year, 1986 was the year structural adjustment programme (SAP) was introduced in Nigeria to trigger economic growth.
LITERATURE REVIEW

SMEs as defined by the European Commission (2003) is a business organisation having less than 250 persons employed; having annual turnover of up to EUR 50 million or a balance sheet total of not more than EUR 43 million. A breakdown by the commission revealed the number of employees each class of business should have. These are as follows:

i. Micro Enterprises have less than 10 persons employed;
ii. Small Enterprises have 10-49 persons employed;
iii. Medium sized enterprises have 50-249 persons employed;
iv. Large Enterprises have 250 or more persons employed.

SMEs in Nigeria pay company tax of 30% (from the income of the company), Value Added Tax of 5% (paid when goods are purchased), Withholding Tax ranging from 5% to 15% based on the services or transaction and Stamp Duties (charged when documents are executed and the amount payable is decided by the Commissioner of Stamp Duties) (Federal Inland Revenue Service, 2019). The aforementioned taxes are collected by the federal government. Also, sole proprietorships, partnerships and unincorporated trust pay personal income tax charged at pay as you earn (PAYE) rates, Business Premises tax and development levy (charged by state governments in addition to withholding taxes of individuals and unincorporated entities). SMEs that fail to remit their taxes are liable to incur tax penalties and pay interest on unpaid taxes in addition to unpaid taxes. Notwithstanding, Deposit Money Banks’ interest rate (maximum) stood at 31.09% as at 2018. Thus, the aforementioned concerns might deter the profitability and growth of SMEs in Nigeria.

Apart from financing and tax constraints, SMEs in Nigeria faced some other problems which include poor management, inadequate infrastructural facilities, competition with foreign and larger companies, poor power supply, high cost of raw materials, high cost of operation, low level of technology, insurgency, and political/economic instability. All the aforementioned factors inhibit SMEs’ performance in the country.

Obi, Ibibum, Tolulope, Olokundun, Amaihian, Borishade and Fred (2018) examined the contribution of small and medium enterprises to economic development in a transition economy like Nigeria. The study used data from 600 respondents in 60 small scale enterprises located in different parts of the country, including Lagos State, Anambra State and Kano State. The data were analysed using tables, percentages and Chi-square ($X^2$). The findings revealed that there is a significant relationship between the operation of small and medium scale enterprises and economic growth in developing economy like Nigeria. In an attempt to examine the effect of SMEs on economic growth in Nigeria, Okkhkhuel (2017) used Pearson Correlation technique to analyse data collected from secondary sources from 1982 to 2012. The study found that there is a significant positive relationship between SMEs (proxied by SMEs share in GDP) and Gross Domestic Product (GDP).

Using t-test, Oaya and Mambula (2017) assessed the impact of SMEs financing on business growth in Nigeria. The study used primary data and 896 SMEs in Keffi and Mararaba metropolis were chosen as respondents for the study. The study discovered that bank’s credit to SMEs has a significant impact on the growth of Nigerian economy. Ilegbinosa and Jumbo (2015) studied the relationship between small and medium scale enterprises and economic growth in Nigeria from 1975-2012. Cointegration and error correction model were used in analysing the data collected. The results showed that finance available to SMEs showed a positive relationship with economic growth (proxied by gross domestic product) while interest rate and inflation rate showed a negative and positive influence on economic growth respectively.

Employing secondary data spanning 1998 to 2017, Olaoye, Adedeji and Yyeni-Agbaje (2018) explored the impact of commercial bank lending to small and medium scale enterprises (SMEs) on Nigerian economy. The study applied correlation analysis, ordinary least square regression and Granger causality test. The findings revealed that commercial bank loans to SMEs has a negative but not significant impact on gross domestic product (GDP); Average commercial bank lending rate to SMEs has a negative but not significant impact on GDP; and inflation rate has a positive but not significant effect on GDP. The study also found that there is no causal relationship between the independent variables (commercial bank loans to SMEs, average commercial bank lending rate to SMEs and inflation rate) and the dependent variable (GDP – A proxy for Nigerian economy).

Myslimi and Kacani (2016) examined the impact of small and medium scale enterprises (SMEs) on economic growth in Albania during the period of 1995-2015. Applying ordinary least square regression technique, the study found that SMEs have no significant impact on real GDP – a proxy for economic growth. Rather, the study found a significant impact of micro and large enterprises on economic growth in Albania. The study of Onakoya, Fasanya and Abdulrahman (2013) examined the impact of financing small and medium scale enterprises on economic growth in Nigeria using a quarterly time series data from 1992 to 2009. The study employed ordinary least square regression technique. Findings of the study showed that loan to small-scale entrepreneurs have a positive impact on economic growth (proxied by real GDP) while interest rate has a negative impact on economic growth.
Bello, Jibir and Ahmed (2018) studied the impact of small and medium scale enterprises on economic growth of Nigeria using time series data spanning between 1986 and 2016. The study employed ordinary least square regression technique in analysing the data collected. The result indicated that small and medium scale enterprises (proxied by total output of SMEs and Bank credit to SMEs) and output growth (represented by real GDP). The result indicated that small and medium scale enterprises in Nigeria make positive contribution towards the development of Nigerian economy. Using primary data sourced from 150 respondents from 16 local government areas of Ekiti State, Opafunso and Adepoju (2014) studied the impact of small and medium scale enterprises on economic development of Ekiti State of Nigeria. Chi-square was used to analyse the data collected. The findings of the study revealed that there is a positive and significant relationship between SMEs and poverty reduction, employment generation and improvement in standard of living of people in Ekiti State.

Akingunola (2011) examined specific financing options available to SMEs in Nigeria and contribution to economic growth via investment level. The Spearman’s Rho correlation test was employed in analysing the secondary data collected. The result indicated that there is a significant positive relationship between SMEs financing (represented by credit to SMEs) and economic growth (represented by investment) in Nigeria. Employing survey method to gather data from 200 respondents, Mauritala, Awolaja and Bako (2012) analysed the impact of small and medium scale enterprises on economic growth and development. The results of the study revealed that the most common constraints hindering small and medium scale business growth in Nigeria are lack of financial support, poor management, corruption, lack of training and experience, poor infrastructure, insufficient profits, and low demand for product and services. Thus, the hindrances limit SMEs ability to contribute to economic growth and development.

Eze and Okpala (2015) evaluated the impact of small and medium scale enterprises on Nigeria’s economic growth using data from 1993 to 2011. The Johansen cointegration test was conducted. The result showed evidence of cointegration, implying that there is a long-run relationship between small and medium scale enterprises and economic growth. Using ordinary least square regression technique, Otugo, Edoko and Ezeanolue (2017) appraised the effect of small and medium enterprises on economic growth in Nigeria. The results revealed that small and medium enterprise, government expenditure to small and medium enterprise, employment generations, commercial bank credit to small and medium enterprise and lending rate to small and medium enterprises have a significant positive impact on economic growth in Nigeria. The study also found that Corruption has a significant negative impact on economic growth in Nigeria.

METHODOLOGY

This study employed ex-post-facto research design. An ex-post-facto research design is a method in which groups with quantities that already exist are compared on the dependent variable. Data for the study were sourced from Central Bank of Nigeria Statistical Bulletin (2019). Augmented Dickey-Fuller (ADF) test was conducted to ascertain the stationarity of the variables. A bivariate regression model was adopted in order to critically observe the sole effect of the independent variable on the dependent variable. Vector Autoregression (VAR) was the appropriate technique of estimation applied in the study as the VAR model is very useful for describing the dynamic nature of economic/financial time series data as well as being a superior technique for forecasting. Thus, VAR Lag Order Selection Criteria aided the selection of a suitable lag for the VAR analysis. The VAR Residual Serial Correlation LM Tests was used to test for autocorrelation. VAR Residual Normality Test was used to confirm that the residuals have a normal distribution. Eviews 9 econometric software was used for the analyses.

The study used a bivariate regression model specified as follows:

\[ GDPGR = f(SMEOGR) \] (i)
\[ GDPGR = a_0 + a_1 SMEOGR + e \] (ii)

Where:

- GDPGR is Gross Domestic Product Growth Rate
- SMEOGR stands for Small and Medium Scale Enterprises Output Growth Rate (proxied by growth rate in trade as a component of GDP)
- \( a_0 \) and \( a_1 \) are regression coefficients; whereas, \( e \) is the error term

RESULTS AND DISCUSSION

Table 1: Stationarity (Unit Root) Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Augmented Dickey-Fuller (ADF) Test Statistic</th>
<th>1% Level Critical Value</th>
<th>5% Level Critical Value</th>
<th>10% Level Critical Value</th>
<th>Order of Integration</th>
<th>Prob. *</th>
<th>Durbin-Watson Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMEs Output Growth Rate</td>
<td>-3.429998</td>
<td>-3.653730</td>
<td>-2.957110</td>
<td>-2.617434</td>
<td>I(0)</td>
<td>0.0172</td>
<td>1.773154</td>
</tr>
<tr>
<td>GDP Growth Rate</td>
<td>-3.396595</td>
<td>-3.653730</td>
<td>-2.957110</td>
<td>-2.617434</td>
<td>I(0)</td>
<td>0.0186</td>
<td>2.005026</td>
</tr>
</tbody>
</table>

Source: Computed by the authors using E-Views 9

Available Online: https://iarconsortium.org/journal-info/IARJBM
The Unit Root test results shown in Table 1 prove that the variables are stationary at level. This is factual as the ADF test statistic (for both variables) is less than the critical value at 5% level of significance. The results are confirmed accurate as the probability values are significant at 5% level. As such, there is no need to test for a long-run relationship; rather, Vector Autoregression (VAR) became the appropriate advanced tool of estimation.

### Table 2: VAR Lag Order Selection Criteria

<table>
<thead>
<tr>
<th>Lag</th>
<th>LogL</th>
<th>LR</th>
<th>FPE</th>
<th>AIC</th>
<th>SC</th>
<th>HQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-108.2133</td>
<td>NA*</td>
<td>71.74277*</td>
<td>7.110534*</td>
<td>7.203049*</td>
<td>7.140691*</td>
</tr>
<tr>
<td>1</td>
<td>-107.9399</td>
<td>0.493917</td>
<td>75.19920</td>
<td>7.157410</td>
<td>7.296183</td>
<td>7.202647</td>
</tr>
<tr>
<td>2</td>
<td>-107.9291</td>
<td>0.018702</td>
<td>80.22242</td>
<td>7.221233</td>
<td>7.406264</td>
<td>7.281549</td>
</tr>
</tbody>
</table>

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

Source: Computed by the authors using E-Views 9

The VAR Lag Order Selection Criteria presented in Table 2 shows that no lag is needed for the VAR estimation. This is confirmed by sequential modified LR test, Final Prediction Error, Akaike Information Criterion, Schwarz Information Criterion and Hannan-Quinn Information Criterion.

### Table 3: Vector Autoregression Estimates

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std Error</th>
<th>t-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>9.062087</td>
<td>2.4125</td>
<td>3.75670</td>
</tr>
<tr>
<td>SMEOGR</td>
<td>0.0523995</td>
<td>0.07464</td>
<td>7.02023</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.613869</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj. R-squared</td>
<td>0.601413</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>49.28368</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Computed by the authors using E-Views 9

Table 3 presents the results of Vector Autoregression (VAR) analysis. The results show that SMEs output growth rate (SMEOGR) has a positive effect on GDP growth rate (GDPGR). A further examination of the results revealed that a 1% increase in SMEOGR would result in 52% increases in GDPGR. The t-Statistic of 7.02 is much higher than the critical value of 4.3 using 2 degrees of freedom at 5% level of significance (two-tailed test), depicting that the estimate is significant at 5% level. R-squared shows that SMEOGR accounted for 61% of the variations in GDPGR. Adjusted R-squared backs-up the result of the R-squared by showing that 60% of the changes in GDPGR are caused by SMEOGR. The regression output is significant at 1% level judging from the F-statistic of 49.28 compared to critical value at 1, 28 degrees of freedom for the regression and residuals respectively. This connotes 99% confidence in the accuracy of the regression result.

### Table 4: VAR Residual Serial Correlation LM Test Results

<table>
<thead>
<tr>
<th>Lags</th>
<th>LM-Stat</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.125602</td>
<td>0.7230</td>
</tr>
<tr>
<td>2</td>
<td>0.250874</td>
<td>0.6165</td>
</tr>
</tbody>
</table>

Source: Computed by the authors using E-Views 9

The results of the serial correlation test presented in Table 4 reveal that the model is free from autocorrelation. As such, the probability value is higher than 0.05 at lag 1 as well as lag 2. Thus, the null hypothesis is accepted.

### Table 5: VAR Residual Normality Test Results

<table>
<thead>
<tr>
<th>Component</th>
<th>Jarque-Bera</th>
<th>Df</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.770606</td>
<td>2</td>
<td>0.1518</td>
</tr>
<tr>
<td>Joint</td>
<td>3.770606</td>
<td>2</td>
<td>0.1518</td>
</tr>
</tbody>
</table>

Source: Computed by the authors using E-Views 9

VAR residual normality test results shown in Table 5 points to the fact that the variables have a normal distribution at 2 degrees of freedom as the probability values are greater than 5%. Therefore, the null hypothesis is accepted.
The Granger causality test results presented in Table 6 demonstrate that there is no causal relationship between GDPGR and SMEOGR as their probabilities are greater than α level. The results confirm that the two variables do not trend together in a cointegrating relationship. This is the reason the two variables were stationary at level signalling non-existence of a long-run relationship.

**Test of Hypothesis**

The hypothesis of the study was restated in both null and alternative forms for proper testing as follows:

**H₀**: Small and medium scale enterprises (SMEs) output growth rate has no significant effect on gross domestic product (GDP) growth rate.

**H₁**: Small and medium scale enterprises (SMEs) output growth rate has a significant effect on gross domestic product (GDP) growth rate.

The VAR results indicated that SMEs output growth rate has a significant positive effect on GDP growth rate. Thus, the alternative hypothesis was accepted while the null hypothesis was rejected.

**DISCUSSION OF FINDINGS**

In addition to signalling a significant positive effect of SMEs output growth rate on GDP growth rate, the study found that 61% of the growth in GDP is influenced by SMEs. This means that SMEs drive economic growth in Nigeria. Thus, increase in SMEs growth would result in increase in GDP growth. The findings of this study agree with the findings of Bello, Jibir and Ahmed (2018) who found a positive and significant effect of SMEs on real GDP in Nigeria using Ordinary Least Square (OLS) regression technique. However, the study did not specify the proportion of real GDP contributed by SMEs. Similarly, employing Pearson Correlation technique, Okhankhuele (2017) reported a significant positive relationship between SMEs and GDP in Nigeria. Due to the correlation technique employed, Okhankhuele (2017) could not affirm the effect of SMEs on GDP. Using primary data analysed with Chi-Square, Obi, Ibidunni, Tolulope, Olokundun, Amaihian, Borishade and Fred (2018) found a significant relationship between SMEs and Economic growth. Other studies conducted in Nigeria, such as Onakoya, Fasanya and Abdulrahman (2013); Otoo, Edoko and Ezeanolue (2017); Olaoye, Adejey and Yyeni-Agbaje (2018); Ilegbinosa and Jumbo (2015); Oya and Mambula (2017); Akingunola (2011) centred on the influence of SMEs financing on economic growth. In Albania, Myslimi and Kacani (2016) found no significant impact of SMEs on real GDP using OLS technique.

**CONCLUSION**

In conclusion, SMEs drive economic growth in Nigeria as SMEs accounts for 61% of the growth in GDP. Thus, the study recommended that government of Nigeria should ensure increased positive effect of SMEs on Nigeria’s economic growth by ensuring that SMEs have increased access to funding at a reduced cost to boost their growth; ensure that the economy is business/investment friendly for SMEs by adjusting key economic policies such as reduction in tax rate/granting of tax waivers, provision of incentives/grants to SMEs in her domain; tackles issues such as dwindling power supply and insecurity.

The study contributed to knowledge as follows:

i. None of the previous studies reviewed considered SMEs output growth rate and GDP growth rate as the predictor and response variables respectively in examining the effect of SMEs on economic growth. However, this study regressed SMEs output growth rate on GDP growth rate for optimum result.

ii. The previous studies reviewed did not employ Vector Autoregression (VAR) technique as applied in this study. VAR happened to be the best technique that fits Nigerian time series data between 1986 and 2018 as regards to SMEs growth rate and GDP growth rate.

iii. This study specified that 61% of the growth in GDP is contributed by SMEs; a finding that is not common.

**REFERENCES**


5. Eze, T. C., & Okpala, C. S. (2015). Quantitative analysis of the impact of small and medium scale enterprises on the growth of Nigerian economy:

---

**Table 6: Granger Causality Test Results**

<table>
<thead>
<tr>
<th>Null Hypothesis</th>
<th>Observations</th>
<th>F-Statistic</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMEOGR does not Granger Cause GDPGR</td>
<td>31</td>
<td>0.77851</td>
<td>0.4695</td>
</tr>
<tr>
<td>GDPGR does not Granger Cause SMEOGR</td>
<td>0.67014</td>
<td>0.5203</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Computed by the authors using E-Views 9*


