

Entrepreneurship and Economic Development in Nigeria: Evidence from Small and Medium Scale Enterprises (SMEs) Financing

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Abstract

Entrepreneur as an agent of economic transformation in society is visible in employment and wealth generation, stimulation of indigenous entrepreneurship or promotion of entrepreneurial culture. To nurture entrepreneurial development, small and medium scale enterprise operators or entrepreneurs are being considered as main sustenance of the economy because of their capacity in enhancing the economy productivity and enhancing standard of living of the common man, as they account for over 50 percent of GDP of developing economies. However, lack of access to relative cheap and effective source of finance have been identified as the major factor hindering their contribution to economic growth in developing countries. This paper assessed the impact of SMEs financing on economic growth and development of Nigeria. The paper adopted correlational research design using secondary data for a period of 22 years (1992-2013). Autoregressive Integrated Moving Average (ARIMA) model was applied in the analysis, the study found that aggregate commercial banks financing of SMEs has significant positive impact on the economic growth and development of Nigeria. The study also found that Microfinance banks' financing in the area of transportation and commerce, manufacturing and food processing and other activities have significantly impacted on economic growth and development of Nigeria during the period. The paper concludes that SMEs financing could significantly improve entrepreneurship in Nigeria and the economic development in return. The paper recommends that governments in Nigeria should make policies towards increasing the funds for financing SMEs both in the commercial and microfinance banks. The government should also encourage more financing in the agricultural and manufacturing activities of SMEs, as this could improve the productivity of the real sector.

Keywords: Microfinance, GDP, Agric Financing, Real Estate & Construction Financing

1.0 Introduction

Entrepreneurship is one of the economic variables that attract the attention of governments and researchers both in the developed and developing countries in the last two decades. Several efforts and initiatives are being made by governments and Non-Governmental Organizations (NGOs) to promote entrepreneurship and contribute to the overall economic growth and development. Interests in the entrepreneurial development continue to be in the forefront of policy debates in the developing countries, especially Nigeria. Recently, private sector has dominated the entrepreneurial development policies globally.

Baig (2007) opine that the private sector can contribute to economic growth, job creation, and national income and hence to national prosperity and competitiveness. According to her, the private sector contributes substantially to the Gross Domestic Product (GDP), and thus unleashing domestic resources (financial and entrepreneurial) is likely to create a more stable and sustainable pattern of growth. However, the major component of private sector, Small and Medium Enterprises (SMEs) is generally considered as the engines of economic growth, cornerstones for creativity and innovation, and seedbeds of entrepreneurship (Baig, 2007; Charles, 2011). SMEs according to the World Bank refer to those businesses with maximum of 300 employees and annual revenue of \$15 (Dalberg, 2009). Central Bank of Nigeria (CBN) sees SMEs as those businesses with less than 50 employees (medium scale businesses less than 100). Essentially, SMEs are business entities that are independently owned and operated, and meets employment or sales standard, whose investment in machinery and equipment does not exceed six hundred thousand naira.

Thus, SMEs has been considered as main sustenance of the economy because of their capacity in enhancing the economy productivity and enhancing standard of living (Akingunola, 2011). Moreover, Sunusi (2003) states that SMEs are critical components of economic development as they account for more than 50 percent of GDP of developing economies. According to him, SMEs are the main source of entrepreneurship and enterprise, and the main source of innovation and technological development; they provide the required human capital and raw materials to larger businesses.

While these roles are critical for the economic development of any country, in many developing countries SMEs operate in the informal sector, technologically backward, with low levels of human resource skills, weak management systems and entrepreneurial capabilities, unavailability of appropriate and timely information, insufficient use of information technology, poor product quality and standardization, and unfriendly environmental production processes (Baig, 2007). These problems have to a large extent contributes to widespread low productivity of SMEs. In sum, SMEs are faced with lack of access to financing and long-term capital, the bases on which businesses operate. Thus, SMEs lack of access to relative cheap and effective source of finance have been identified as the major factors hindering their contribution to economic growth in developing countries (Friday, 2010; Akingunola, 2011).

Consequently, governments and NGOs are becoming more sensitive to the need to create a friendly business climate, supportive of the needs of the SMEs, particularly in the developing nations. In view of this, several schemes and institutions have been established in Nigeria since independence to finance and extend credits to SMEs; these include the direct financing and establishment of Agricultural Development Programmes such as Farm Settlement Schemes (FSS) and River Basin Development Authorities (RBDA) between 1950-1960; the establishment of Nigerian Industrial Development Bank (NIDB) in 1964 and the Nigerian Agricultural and Cooperative Bank (NACB) in 1973 to provide soft credit facilities to the farmers, small and medium scale industries; the establishment of the Peoples Bank of Nigeria (PBN), Community Banking Scheme in 1990 and the establishment of the Family Economic Advancement Programme (FEAP) in 1997; the establishment of the Nigeria Agricultural Cooperation and Rural Development Bank (NACRDB) by the merger of FEAP, NACB and PBN in 2000; and more recently the establishment of the Micro Finance Bank (MFB) Scheme on 16th December, 2005.

Although some of the programmes have recorded some success, it is still seen that there are need for micro financing across different Nigerian regions to address the rising level of poverty and small business failures. On the other hand, the macroeconomic of government is to achieve sustainable economic growth and development through full employment and economic productivity. Financing SMEs which constitute over 50% of business in Nigeria could be a critical role towards achieving sustainable economic growth and development. However, existing literature on the SMEs financing and economic development provide a contrasting results; for instance Garba (2002) and Franck and Huyhebaert (2008) are of the opinion that there is a scanty evidence that SMEs have had any direct impact on economic growth and development of any nation. Hence, this with respect to Nigeria constitutes the problem that this paper attempt to examine, and leads to the research question of how does SMEs financing affect the economic growth and development of Nigeria.

Several studies have examined entrepreneurship using SMEs from different jurisdictions using different techniques; however, in Nigeria most of the literature focus on the challenges, prospect and problems of SMEs in Nigeria. Very few studies attempt to find the link between SMEs financing and economic development. Therefore, the main objective of this paper is to assess the effect of SMEs financing on economic growth and development of Nigeria. This study is unique, in that the study focuses on the six main SMEs businesses (Agric and Forestry, Mining and Quarantine, Manufacturing and Food processing, Real Estate and Construction, Transport and Commerce, and Others). The following research hypothesis is formulated in null form;

H_{01} : Small and Medium Enterprises' financing has no significant effect on the Economic growth and development of Nigeria.

The study is a time-series analysis and it covers a period of 22 years (1992-2013). Two main sources of SMEs financing (Micro finance banks and Commercial banks) are considered in this study. The rest of the paper is organized as follows; section two covers literature review, section three outlined the methodology, section four covers results and hypothesis testing and section five deals with the summary and recommendations.

2.0 Literature Review

According to Ogechukwu, (2009) there is no generally accepted definition of SMEs, the concept is defined by different authors and scholars in terms of capital out lay, number of employees, sales turnover, fixed capital investment, available plant and machinery, market share and the level of development.

In view of the critical role SMEs are playing in the economic growth and development through job creation and productivity, several studies have been conducted investigating different aspect of SMEs activities and financing. However, these studies revealed mix and conflicting results, necessitating the need for the present study.

For instance, Gbandi and Amissah (2014) in view of the underperformance of SMEs in Nigeria despite the fact that the SMEs in Nigeria constitute more than 90% of Nigerian businesses, and their low contribution to the nation's GDP, they focus on adequate funding which will take care of some of the problems such as provision of modern technology and low managerial skills of SMEs. They examined the financing of SMEs in Nigeria and the various financing options available to the SMEs, which involved looking at debt financing by considering the role commercial, microfinance banks, co-operatives and other finance institutions play in the financing of SMEs in Nigeria. They also considered the role of equity financing through Venture capital and Business angels financing. They concluded that funding of SMEs in Nigeria is very critical if they are to perform their role of growth and development of the nation's economy.

Muritala, Awolaja and Bako (2012) investigated Small and Medium Enterprises as a veritable tool in Economic Growth and Development using survey method. The results of the study therefore reveal 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. The paper recommends that Government should as matter of urgency assist prospective entrepreneurs to have access to finance and necessary information relating to business opportunities, modern technology, raw materials, market, plant and machinery which would enable them to reduce their operating cost and be more efficient to meet the market competitions.

Friday (2012) assessed the impact of Microfinance on Small and Medium Enterprises (SMEs) in Nigeria using survey design. The findings of the study reveal that significant number of the SMEs benefitted from the MFIs loans even though only few of them were capable enough to secure the required amount needed. Interestingly, majority of the SMEs acknowledge positive contributions of MFIs loans towards promoting their market share, product innovation achieving market excellence and the overall economic company competitive advantage. The paper recommended that Government should try to provide sufficient infrastructural facilities such as electricity, good road network and training institutions to support SMEs in Nigeria.

Quaye (2011) conducted a study of the effects of Microfinance Institution (MFIs) on the growth of Small and Medium Scale Enterprises (SMEs) in the Kumasi Metropolis. The study examined the detailed profile of SMEs in the Kumasi Metropolis of Ghana, the contribution of MFIs to entrepreneurial growth, the challenges encountered by SMEs in accessing credit and the rate of credit utilization by SMEs. The analysis of the profile of SMEs show that most SMEs are at their Micro stages since they employ less than six people and the sector is hugely dominated by the commerce sub-sector. The research also indicates that MFIs have had a positive effect on the growth of SMEs. Some of the critical contributions of MFIs include; greater access to credit, savings enhancement and provision of business, financial and managerial training. Irrespective of the contributions of MFIs to SMEs, there are challenges that affect their operations of both SMEs and MFIs. The major challenge faced by SMEs is the cumbersome process associated with accessing credit of which collateral security and high interest rate are major setback. The MFIs on the other hand, face some challenges relating to credit misappropriation and non-disclosure of the relevant facts of their businesses. In the final analysis, the research clearly reveals that MFIs have a positive effect on the growth SMEs. The study emphasized that in order to enhance a sustained and accelerated growth in the operations of SMEs credits should be client-oriented and not product- oriented. Proper and extensive monitoring activities should be provided for clients who are granted loans.

Theoretical Framework

One of the common theories of economic growth and development is Keynesian theory, which focuses on the sustainable economic development and the role of economic policy in the achievement of macroeconomic objectives.

The Keynesian postulations emphasize that demand management policies can and should be used to improve macroeconomic performance and sustainability. That is, macroeconomic policies should involve setting monetary and fiscal variables in each time period at the values which are thought necessary to achieve the government's objectives (Abata, Kehinde, & Bolarinwa, 2012). Although Keynesian theory is of the view that the private sector is inherently unstable, it is subject to frequent and quantitatively important disturbances in the components of aggregate demand. It is the task of counter cyclical or stabilization policies to offset these private sector disturbances and so keep real output close to its market-clearing equilibrium time path (Omitogun and Ayinla, 2007).

Therefore, based on the Keynesian economic growth model financing SMEs should be part of macroeconomic policies of government in which both the fiscal and monetary policies should recognize to achieve the desired levels of economic growth and development of Nigeria. In view of this, Zeller and Sharma (1998) argue that microfinance can aid in the improvement or establishment of family enterprise, potentially making the difference between alleviating poverty and economically secure life. On the other hand, Burger (1989) indicates that microfinance tends to stabilize rather than increase income and tends to preserve rather than to create jobs. However, Buckley (1997) came to the conclusion that there was little evidence to suggest that any significant and sustained impact of microfinance services on clients in terms of SME development, increased income flows or level of employment. The focus in this argument is that improvement to access to microfinance and market for the poor people was not sufficient unless the change or improvement is accompanied by changes in technology and or technique.

Diagne and Zeller (2001) on the other hand argue that insufficient access to credit by the poor just below or just above the poverty line may have negative consequences for SMEs and overall welfare. Access to credit further increases SME's risk-bearing abilities; improve risk-copying strategies and enables consumption smoothing overtime. With these arguments, microfinance is assumed to improve the welfare of the poor and economic development. Therefore, microfinance institutions that are financially sustainable with high outreach have a greater livelihood and also have a positive impact on SME development because they guarantee sustainable access to credit (Rhyme and Otero, 1992). This paper is an attempt to investigate the effect of financing by microfinance institutions and commercial banks on the economic development of Nigeria.

3.0 Methodology

This paper adopted correlational research design to examine the effect of SMEs financing on the economic development of Nigeria. The choice of this design is informed by the effectiveness of the method in investigating the relationships among theoretically related variables. The study used secondary data from different sources: CBN 2013 Statistical Bulletin and the aggregated data from the annual reports of Microfinance Banks and Commercial Banks for all the period of the study. The data collected from the sources is a time series for the period of 22 years (1992-2013).

Technique of Data Analysis

The technique of data analysis adopted in this study is Autoregressive Integrated Moving Average (ARIMA) model. The choice of the model is informed by the fact that the time series has unit root therefore, OLS regression estimators' model may be biased. ARIMA model in this regard is very efficient for providing the means to fit linear models with nonstationary time series.

The study on the other hand conducted some robustness tests to ensure the reliability of the results. These tests include the test of heteroskedasticity, collinearity and the data normality and unit root tests. The analysis is conducted using Statistics/Data Analysis Software (STATA 11.0).

Variables Measurement and Model Specification

The variables of the study are the SMEs finance from the commercial banks and the microfinance banks (which was distributed to the following SMEs activities, agric and forestry, mining and quarrying, manufacturing and food processing, real estate and construction, transportation and commerce and others) and Economic development variable.

Therefore, the model of the study is mathematically expressed as follows;
Economic Development = f(SMEs Financing)

$$GDP = f(ACBF, AGRF, MNQF, MFPP, RESF, TRCF, FOAC)$$

$$GDP_t = \gamma_0 + \gamma_1ACBF_t + \gamma_2AGRF_t + \gamma_3MNQF_t + \gamma_4MFPP_t + \gamma_5RESF_{it} + \gamma_6TRCF_t + \gamma_7FOAC_t + \mu_t \dots i$$

Where; GDP_t is the gross domestic product in year t, $ACBF_t$ is the aggregate commercial banks financing in year t, $AGRF_t$ is the agric and forestry business financing in year t, $MNQF_t$ is the mining and quarrying business financing in year t, $MFPP_t$ is the manufacturing and food processing business financing in year t, $RESF_t$ is the real estate and construction business financing in year t, $TRCF_t$ is the transportation and commerce business financing in year t, $FOAC_t$ is the financing of other business activities in year t, γ_0 is the intercept, $\gamma_1, \gamma_2, \gamma_3, \gamma_4, \gamma_5, \gamma_6$ and γ_7 are the coefficients and μ_t is the error term/disturbances.

4.0 Results and Discussions

This section presents and discusses the results obtained from the tests conducted on the data collected for the study. The section begins with the description of the data collected for the study and then the inferential statistics.

Descriptive Statistics

The descriptive statistics of the data collected for the study is presented in Table 2;

Table 2: Descriptive Statistics

Variables	Min.	Max.	Mean	SD	Skewness	Kurtosis	N
GDP	875.34	80222.13	19894.85	24290.88	1.4569	3.7087	22
ACBF	13.5122	153.28	48.50	31.08	1.7769	6.9655	22
AGRF	0.0295	9.7049	2.3761	2.5429	1.1595	3.9309	22
MNQF	0.0037	0.6241	0.2262	0.2478	0.5429	1.4853	22
MFPP	0.0199	2.9373	1.0568	1.0740	0.7219	1.8448	22
RESF	0.0146	4.2223	1.0676	1.3453	0.9469	2.5334	22
TRCF	0.0456	59.7743	12.5501	18.0131	1.4966	4.0399	22
FOAC	0.0225	29.6865	5.7142	8.6152	1.4052	3.9248	22

Source: STATA Output (Appendix 1)

Table 2 indicates that the measure of the economic development (GDP) in Nigerian during the period of 22 years (1992-2013) has minimum and maximum values of N875.34 billion and N80222.13 billion respectively. The average value of the GDP during the period is N19894.85 billion with standard deviation of N24290.88 billion, implying that the data deviate from the both sides of mean by N24290.88 billion. This suggests that the data for the GDP is widely dispersed during the sample period, because the standard deviation is higher than the mean value. The coefficient of skewness of 1.4569 suggests that the data is positively skewed and did not comply with the symmetrical distribution assumption. Similarly, the coefficient of kurtosis of 3.7087 also implies that the Gaussian distribution assumption of normal data is not been met.

Table 2 also indicates that the aggregate commercial banks financing (ACBF) of SMEs during the period has minimum and maximum values of N13.51 billion and N153.28 billion respectively. The average value of the ACBF during the period is N48.50 billion with standard deviation of N31.08 billion, implying that the data deviate from the both sides of mean by N31.08 billion. This suggests that the data from the ACBF variable is widely dispersed from the mean during the sample period, because the standard deviation is very high. The coefficient of skewness of 1.7769 suggests that the data is positively skewed and did not comply with the symmetrical distribution assumption. The coefficient of kurtosis of 6.9655 on the other hand implies that the Gaussian distribution assumption of normal data is not been met.

The descriptive results also show that the agricultural financing (AGRF) of SMEs by microfinance banks during the period has minimum and maximum values of N0.0295 billion and N9.7049 billion respectively. The average value of the AGRF during the period is N2.38 billion with standard deviation of N2.54 billion, indicating that the data deviate from the both sides of mean by N2.54 billion. This suggests that the data from the AGRF variable is dispersed from the mean during the sample period, because the standard deviation is higher than the mean value. The coefficient of skewness of 1.1595 implies that the data is positively skewed and did not meet the symmetrical distribution assumption. The coefficient of kurtosis of 3.9309 on the other hand implies that the Gaussian distribution assumption of normal data is not been met.

The results from table 2 also show that the mining and quarrying financing (MNQF) of SMEs by microfinance banks during the period has minimum and maximum values of N0.0037 billion and N0.6241 billion respectively. The average value of the MNQF during the period is N0.2262 billion with standard deviation of N0.2478 billion, indicating that the data deviate from the both sides of mean by N0.2478 billion. This suggests that the data from the MNQF variable is widely dispersed from the mean during the sample period, because the standard deviation is higher than the mean value. The coefficient of skewness of 0.5429 implies that the data does not follow the normal curve because data is positively skewed. Similarly, the coefficient of kurtosis of 1.4853 also suggests that the Gaussian distribution assumption of normal data is met.

The results from table 2 show that the average amount spent on manufacturing and food processing (MFPP) activities of SMEs by microfinance banks during the period is N1.0568 billion with standard deviation of N1.0740 billion, indicating that the data deviate from the both sides of the mean by N1.0740 billion. This suggests that the data from the MFPP variable is widely dispersed from the mean during the sample period, because the standard deviation is higher than the mean value. The minimum and maximum values of MFPP during the period is N0.0199 billion and N2.9373 billion respectively. The skewness of 0.7219 implies that the data does not follow the normal curve because is positively skewed; the kurtosis value of 1.8448 on the other hand implies that the Gaussian distribution assumption of normal data is not met.

Lastly, Table 2 shows that the financing of other activities (FOAC) of SMEs during the period has minimum and maximum values of N0.0225 billion and N29.6865 billion respectively. The average amount spent on the other activities during the period is N5.7142 billion with standard deviation of N8.6152 billion, implying that the data deviate from the both sides of mean by N8.6152 billion. This suggests that the data from the FOAC variable is widely dispersed from the mean during the sample period, because the standard deviation is very high. The coefficient of skewness of 1.4052 suggests that the data is positively skewed and did not comply with the symmetrical distribution assumption. The coefficient of kurtosis of 3.9248 on the other hand implies that the Gaussian distribution assumption of normal data is not met.

However, the analysis of the descriptive statistics of the data collected for the study suggested that the data is widely dispersed which is an indication of that the data is not normally distributed, as pointed by the higher values of standard deviation in most of the variables. However, the Shapiro Wilk Test for Normal Data (see appendix) indicates that the data from MNQF, RESF and FOAC do not follow the normal curve, because the null hypothesis that the data is normally distributed is rejected at 5% level of significance. This could affect OLS estimators and necessitate the use of other techniques.

On the other hand, the paper employed Augmented Dickey-Fuller unit root test to investigate the stationary process of the data; the results are presented in table 3 as follows;

Table 3: Augmented Dicky-Fuller Test for Unit Root

Variables	Z-Statistic	P-Values
GDP	0.367	0.9802
ACBF	-2.078	0.2536
AGRF	-1.977	0.2967
MNQF	-0.700	0.8467
MFPP	-0.751	0.8330
RESF	-0.602	0.8706
TRCF	-0.030	0.9559
FOAC	-0.314	0.9235

Source: STATA Output (Appendix)

Table 3 indicates the presence of unit root in the time series, because all the p-values of the Z-statistics are not statistically significant at all levels of significance. Thus, the null hypothesis that the data has unit root is not rejected.

Correlation Results

The correlations of the variables of the study are presented in Table 4 as follows;

Table 4: Correlation Matrix

Var	GDP	ACBF	AGRF	MNQF	MFPF	RESF	TRCF	FOAC
GDP	1.0000							
ACBF	0.4570**	1.0000						
AGRF	0.8425*	0.4790**	1.0000					
MNQF	0.9204*	0.2444	0.7916*	1.0000				
MFPF	0.8979*	0.3654	0.9481*	0.9114*	1.0000			
RESF	0.9091*	0.1629	0.7098*	0.9675*	0.8561*	1.0000		
TRCF	0.9606*	0.3026	0.8595*	0.9743*	0.9586*	0.9534*	1.0000	
FOAC	0.8864*	0.1251	0.6642*	0.9579*	0.8402*	0.9645*	0.9456*	1.0000

Source: STATA Output (Appendix 4)

** Significant at 5% level

* Significant at 1% level

The correlation result in table 4 presents the results of the relationship between the SMEs financing and economic development of Nigeria. The table shows that there is a significant statistical positive relationship between economic development (GDP) and aggregate commercial banks financing (ACBF) during the period of the study, from the correlation coefficient of 0.4570, which is statistically significant at 5% level of significance. This implies that as ACBF increases, economic development in Nigeria likely increases. The result from the table also indicates that there is a significant positive association between AGRF and GDP during the period of the study, from the correlation coefficient of 0.8425 which is statistically significant at 1% level of significance. This relationship suggests that, economic development likely increases with increase in expenditure on agricultural activities financing in Nigeria. Moreover, the table shows a significant positive relationship between MNQF and GDP during the period of the study, from the correlation coefficient of 0.9204 which is statistically significant at 1% level of significance. This relationship also suggests that, economic development likely increases with increase in the amount spent mining and quarrying activities of SMEs.

Similarly, the table shows a significant statistical positive relationship between GDP and MFPF during the period of the study, from the correlation coefficient of 0.8979, which is statistically significant at 1% level of significance. This suggests that as amount of financing on manufacturing and food processing financing increases, economic development in Nigeria likely increases. Moreover, the result from the table indicates a significant positive association between RESF and GDP during the period of the study, from the correlation coefficient of 0.9091 which is statistically significant at 1% level of significance. This relationship suggests that, economic development likely increases with increase in expenditure on real estate and construction activities in Nigeria. The table also shows a significant positive relationship between TRCF and GDP during the period of the study, from the correlation coefficient of 0.9606 which is statistically significant at 1% level of significance. This relationship implies that, economic development likely increases with increase in the amount spent transportation and commerce activities of SMEs. Lastly, table 4 shows a significant positive relationship between FOAC and GDP during the period of the study, from the correlation coefficient of 0.8864 which is statistically significant at 1% level of significance. This relationship implies that, economic development likely increases with increase in the amount spent other SMEs' activities. However, to conclude about the relationship and the impact of SMEs financing and economic development in Nigeria, regression analysis is applied.

Regression Results and Hypotheses Testing

In this section, the hypothesis formulated for the study is tested; the section begins with the discussion of the regression model as presented in table 5;

Table 5: Regression Model Summary

Variables	Statistics	P-Value
R Square	0.9897	
Adj. R Square	0.9845	
Wald Chi2	854.77	0.0000
Durbinalt: Chi2	0.0468	0.4938
Mean VIF	3.38	
Hetest: Chi2	0.01	0.9243
Archlm: Chi2	0.663	0.4156

Source: STATA Output (Appendix)

The results from table 5 indicate that the explanatory variables (ACBF, AGRF, MNQF, MFPP, RESF, TRCF and FOAC) of the study explained 98.45% of the total variations in the dependent variable, economic development (GDP) of Nigeria during the period of the study, from the coefficient of multiple determinations (adjusted R square of 0.9845). The table also shows that the model of the study is fit at 1% level of significance as indicated by the Wald Chi2 of 854.77 with the P-value of 0.0000. The Breuch Pagan/Cook-Weisberg test for heteroskedasticity (Hetest) Chi2 of 0.01 with p-value of 0.9243 confirms the absence of the effects of heteroskedasticity, that is, there is constant variance in the residuals (i.e the error terms are homoscedastic). Similarly, the results show the absence of perfect multicollinearity among the independent variables, because the mean Varince Inflation Factor (VIF) is 3.38. On the other hand, the Engle's LM test for the presence of autoregressive conditional heteroskedasticity (ARCH) provides evidence of the absence of ARCH (Archlm Chi2 of 0.663 with p-value of 0.4156. However, the Durbin's alternate test for higher orders of autocorrelation (Durbinalt) indicated that there is no serial correlation (Chi2 of 0.468 with p-value of 0.4938). However, consistent with the presence of unit root in the data, the study used Autoregressive Integrated Moving Average (ARIMA), which is very efficient for providing the means to fit linear models with nonstationary time series. Therefore, the hypothesis of the study is tested in the following section.

Hypotheses Testing

In this section, the hypothesis formulated is tested to draw conclusions about the impact of SMEs financing on economic development in Nigeria. Table 6 present the regression coefficient for the analysis;

Table 6: ARIMA Regression Coefficients

Variables	Coefficients	Z-Values	P-values
ACBF	0.3672	4.04	0.000
AGRF	0.4639	1.39	0.164
MNQF	-0.1031	-0.31	0.760
MFPP	-1.2436	-3.77	0.000
RESF	0.1198	0.36	0.718
TRCF	0.8550	3.69	0.000
FOAC	0.2298	1.90	0.058
CONSTANT	12.3575	5.56	0.000

Source: STATA Output (Appendix)

The results in table 5 shows that the aggregate commercial banks financing (ACBF) of SMES during the period under review has significant positive impact on the economic development (GDP), from the coefficient of 0.3672 with z-value of 4.04 which is statistically significant at 1% level of significance (p-value of 0.000). This implies a direct relationship between the ACBF and GDP; that is, as the commercial banks financing increases, the economic development improves. The results also indicate that agricultural financing (AGRF) of SMES by microfinance banks during the period under review has positive impact on the economic development (GDP), from the coefficient of 0.4639 with z-value of 1.39 which is not statistically significant at all levels of significance (p-value of 0.164). This implies a direct relationship between the AGRF and GDP; that is, as the microfinance banks financing of SMEs' agricultural activities increases, the economic development improves, but is not statistically significant.

Table 5 shows that the mining and quarrying financing (MNQF) of SMES by microfinance banks during the period under review has negative impact on the economic development (GDP), from the coefficient of -0.1031 with z-value of -0.31 which is not statistically significant at all levels of significance (p-value of 0.000). This implies an inverse relationship between the MNQF and GDP; that is, as the microfinance banks financing of SMEs' mining and quarrying activities increases, the economic development diminishes, but is not statistically significant. Similarly, the Table shows that the manufacturing and food processing financing (MFPP) of SMES by microfinance banks during the period under review has significant negative impact on the economic development (GDP), from the coefficient of -1.2436 with z-value of -3.77 which is statistically significant at 1% level of significance (p-value of 0.000). This implies an inverse relationship between the MFPP and GDP; that is, as the microfinance banks financing of SMEs' manufacturing and food processing activities increases, the economic development diminishes. This suggests that the sector is unproductive and insufficient financing on the other hand.

Table 5 also indicates that the real estate and construction financing (MNQF) of SMES by microfinance banks during the period has positive impact on the economic development (GDP), from the coefficient of 0.1198 with z-value of 0.36 which is not statistically significant at all levels of significance (p-value of 0.718). This implies a direct relationship between the RESF and GDP; that is, as the microfinance banks financing of SMEs' real estate and construction activities increases, the economic development improves, but is not statistically significant. Similarly, the Table shows that the transportation and commerce financing (TRCF) of SMES by microfinance banks during the period has significant positive impact on the economic development (GDP), from the coefficient of 0.8550 with z-value of 3.69 which is statistically significant at 1% level of significance (p-value of 0.000). This implies a direct relationship between TRCF and GDP; that is, as the microfinance banks financing of SMEs' transportation and commerce activities increases, the economic development improves. The Table also shows that the financing of other activities (FOAC) of SMEs by microfinance banks during the period has significant positive impact on the economic development (GDP), from the coefficient of 0.2298 with z-value of 1.90 which is statistically significant at 10% level of significance (p-value of 0.058). This implies a direct relationship between FOAC and GDP; that is, as the microfinance banks financing of SMEs' other activities increases, the economic development improves.

However, in sum the results provide evidence that SMEs financing have significant impact on the economic development of Nigeria during the period under review, as show by the significant statistical effect of ABCF, MFPF, TRCF and FOAC on the GDP. Based on these, the paper reject the null hypothesis which state that Small and Medium Enterprises' financing has no significant effect on the Economic growth and development of Nigeria. The paper therefore infers that entrepreneurship with regard SMEs in Nigeria could improve the economic development of Nigeria.

5.0 Conclusion and Recommendations

Emanating from the analysis conducted and the hypothesis, the paper concludes that SMEs financing could significantly improve entrepreneurship in Nigeria and the economic development in return. Particularly, the study concludes that commercial banks financing of SMEs is significant in influencing entrepreneurship and economic development of Nigeria. Moreover, the paper concludes that Microfinance banks financing in the area of transportation and commerce, and other activities is also significant in influencing entrepreneurship and economic growth and development of Nigeria.

The paper recommends that governments in Nigeria should make policies towards increasing the funds for financing SMEs both in the commercial and microfinance banks. The government should also encourage more financing in the agricultural and manufacturing activities of SMEs, as this could improve the productivity of the real sector.

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Appendix

```
. tsset year
      time variable: year, 1992 to 2013
      delta: 1 year
```

```
. su gdp acbf agrf mnqf mfpf resf trcf foac, detail
```

gdp				
	Percentiles	Smallest		
1%	875.3425	875.3425		
5%	1089.68	1089.68		
10%	1399.703	1399.703	Obs	22
25%	4032.3	2907.358	Sum of Wgt.	22
50%	8854.638		Mean	19894.85
		Largest	Std. Dev.	24290.88
75%	24296.33	54204.8		
90%	63258.58	63258.58	Variance	5.90e+08
95%	71186.53	71186.53	Skewness	1.456955
99%	80222.13	80222.13	Kurtosis	3.708741

acbf				
	Percentiles	Smallest		
1%	13.5122	13.5122		
5%	15.4629	15.4629		
10%	16.36649	16.36649	Obs	22
25%	25.7137	20.4	Sum of Wgt.	22
50%	43.4222		Mean	48.50355
		Largest	Std. Dev.	31.0812
75%	57.038	65.0727		
90%	82.3684	82.3684	Variance	966.0412
95%	90.1765	90.1765	Skewness	1.776884
99%	153.2846	153.2846	Kurtosis	6.965466

agrf				
	Percentiles	Smallest		
1%	.0295	.0295		
5%	.0986	.0986		
10%	.1232	.1232	Obs	22
25%	.3674	.1554	Sum of Wgt.	22
50%	1.127775		Mean	2.376124
		Largest	Std. Dev.	2.542882
75%	4.7369	4.9171		
90%	5.0568	5.0568	Variance	6.466247
95%	5.1029	5.1029	Skewness	1.159594
99%	9.70491	9.70491	Kurtosis	3.930957

mnqf				
	Percentiles	Smallest		
1%	.0037	.0037		
5%	.0057	.0057		
10%	.01199	.01199	Obs	22
25%	.027	.0176	Sum of Wgt.	22
50%	.0651		Mean	.2262409
		Largest	Std. Dev.	.2477631
75%	.5204	.5697		
90%	.571	.571	Variance	.0613865
95%	.6033	.6033	Skewness	.5429474
99%	.62414	.62414	Kurtosis	1.485268

mfpf

Percentiles	Smallest		
1%	.0199	.0199	
5%	.1248	.1248	
10%	.1296	.1296	Obs 22
25%	.2	.13036	Sum of Wgt. 22
50%	.459835		Mean 1.056824
75%	2.1729	Largest 2.4826	Std. Dev. 1.074032
90%	2.82803	2.82803	Variance 1.153546
95%	2.9125	2.9125	Skewness .7219966
99%	2.9373	2.9373	Kurtosis 1.844808

resf

Percentiles	Smallest		
1%	.0146	.0146	
5%	.03194	.03194	
10%	.0349	.0349	Obs 22
25%	.0719	.0475	Sum of Wgt. 22
50%	.173575		Mean 1.067565
75%	2.2574	Largest 2.55443	Std. Dev. 1.345258
90%	2.616	2.616	Variance 1.809719
95%	3.54824	3.54824	Skewness .9468534
99%	4.2223	4.2223	Kurtosis 2.533438

trcf

Percentiles	Smallest		
1%	.0456	.0456	
5%	.28	.28	
10%	.5138	.5138	Obs 22
25%	.695	.5757	Sum of Wgt. 22
50%	3.49084		Mean 12.55005
75%	23.96248	Largest 28.3142	Std. Dev. 18.01305
90%	38.2758	38.2758	Variance 324.4699
95%	53.4095	53.4095	Skewness 1.496557
99%	59.7743	59.7743	Kurtosis 4.039911

foac

Percentiles	Smallest		
1%	.0225	.0225	
5%	.04926	.04926	
10%	.0685	.0685	Obs 22
25%	.13745	.1109	Sum of Wgt. 22
50%	.32824		Mean 5.714166
75%	10.23858	Largest 16.95686	Std. Dev. 8.61521
90%	19.2012	19.2012	Variance 74.22185
95%	19.8784	19.8784	Skewness 1.405235
99%	29.6865	29.6865	Kurtosis 3.924793

. swilk gdp acbf agrf mnqf mfpf resf trcf foac

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
gdp	22	0.96525	0.880	-0.259	0.60206
acbf	22	0.96092	0.990	-0.020	0.50807
agrf	22	0.93436	1.663	1.031	0.15124
mnqf	22	0.88911	2.809	2.094	0.01811
mfpf	22	0.92371	1.933	1.336	0.09075
resf	22	0.88946	2.800	2.088	0.01840
trcf	22	0.95460	1.150	0.283	0.38841
foac	22	0.88199	2.990	2.221	0.01319

. varsoc gdp acbf agrf mnqf mfpf resf trcf foac

Selection-order criteria

Sample: 1996 - 2013 Number of obs = 18

lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-45.5977				5.3e-08	5.9553	6.00987	6.35103
1	86.2409	263.68	64	0.000	6.2e-11	-1.58232	-1.09124	1.97917
2	2468	4763.5	64	0.000	3.e-117*	-259.112	-258.184	-252.384
3	4276.97	3617.9*	64	0.000	.	-459.219*	-458.237*	-452.096*
4	4258.14	-37.678	64	.	.	-457.126	-456.144	-450.003

Endogenous: gdp acbf agrf mnqf mfpf resf trcf foac

Exogenous: _cons

. dfuller gdp, lag (3)

Augmented Dickey-Fuller test for unit root Number of obs = 18

Test Statistic	Interpolated Dickey-Fuller			
	1% Critical Value	5% Critical Value	10% Critical Value	
Z(t)	0.367	-3.750	-3.000	-2.630

Mackinnon approximate p-value for Z(t) = 0.9802

. dfuller acbf, lag (3)

Augmented Dickey-Fuller test for unit root Number of obs = 18

Test Statistic	Interpolated Dickey-Fuller			
	1% Critical Value	5% Critical Value	10% Critical Value	
Z(t)	-2.078	-3.750	-3.000	-2.630

Mackinnon approximate p-value for Z(t) = 0.2536

. dfuller agrf, lag (3)

Augmented Dickey-Fuller test for unit root Number of obs = 18

Test Statistic	Interpolated Dickey-Fuller			
	1% Critical Value	5% Critical Value	10% Critical Value	
Z(t)	-1.977	-3.750	-3.000	-2.630

Mackinnon approximate p-value for Z(t) = 0.2967

. dfuller mnqf, lag (3)

Augmented Dickey-Fuller test for unit root Number of obs = 18

Test Statistic	Interpolated Dickey-Fuller			
	1% Critical Value	5% Critical Value	10% Critical Value	
Z(t)	-0.700	-3.750	-3.000	-2.630

Mackinnon approximate p-value for Z(t) = 0.8467

. dfuller mfpf, lag (3)

Augmented Dickey-Fuller test for unit root Number of obs = 18

	Test Statistic	Interpolated Dickey-Fuller		
		1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-0.751	-3.750	-3.000	-2.630

Mackinnon approximate p-value for Z(t) = 0.8330

. dfuller resf, lag (3)

Augmented Dickey-Fuller test for unit root Number of obs = 18

	Test Statistic	Interpolated Dickey-Fuller		
		1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-0.602	-3.750	-3.000	-2.630

Mackinnon approximate p-value for Z(t) = 0.8706

. dfuller trcf, lag (3)

Augmented Dickey-Fuller test for unit root Number of obs = 18

	Test Statistic	Interpolated Dickey-Fuller		
		1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-0.030	-3.750	-3.000	-2.630

Mackinnon approximate p-value for Z(t) = 0.9559

. dfuller foac, lag (3)

Augmented Dickey-Fuller test for unit root Number of obs = 18

	Test Statistic	Interpolated Dickey-Fuller		
		1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-0.314	-3.750	-3.000	-2.630

Mackinnon approximate p-value for Z(t) = 0.9235

. pwcorr gdp acbf agrf mnqf mfpf resf trcf foac, star (0.05) sig

	gdp	acbf	agrf	mnqf	mfpf	resf	trcf
gdp	1.0000						
acbf	0.4570* 0.0325	1.0000					
agrf	0.8425* 0.0000	0.4790* 0.0241	1.0000				
mnqf	0.9204* 0.0000	0.2444 0.2731	0.7916* 0.0000	1.0000			
mfpf	0.8979* 0.0000	0.3654 0.0945	0.9481* 0.0000	0.9114* 0.0000	1.0000		
resf	0.9091* 0.0000	0.1629 0.4688	0.7098* 0.0002	0.9675* 0.0000	0.8561* 0.0000	1.0000	
trcf	0.9606* 0.0000	0.3026 0.1711	0.8595* 0.0000	0.9743* 0.0000	0.9586* 0.0000	0.9534* 0.0000	1.0000
foac	0.8864* 0.0000	0.1251 0.5792	0.6642* 0.0007	0.9579* 0.0000	0.8402* 0.0000	0.9645* 0.0000	0.9456* 0.0000
		foac					
foac		1.0000					

. reg gdp acbf agrf mnqf mfpf resf trcf foac

Source	SS	df	MS			
Model	36.296493	7	5.18521329	Number of obs =	22	
Residual	.379114931	14	.027079638	F(7, 14) =	191.48	
Total	36.675608	21	1.74645752	Prob > F =	0.0000	
				R-squared =	0.9897	
				Adj R-squared =	0.9845	
				Root MSE =	.16456	

gdp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
acbf	.3672176	.076576	4.80	0.000	.2029784 .5314568
agrf	.4639033	.1409506	3.29	0.005	.1615944 .7662123
mnqf	-.1031499	.134501	-0.77	0.456	-.3916258 .1853261
mfpf	-1.243563	.1959927	-6.34	0.000	-1.663925 -.8232004
resf	.119808	.1068085	1.12	0.281	-.1092735 .3488895
trcf	.8550418	.1774603	4.82	0.000	.4744273 1.235656
foac	.2298159	.0992682	2.32	0.036	.0169069 .442725
_cons	12.35748	2.064498	5.99	0.000	7.929573 16.78539

. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of gdp

chi2(1) = 0.01

Prob > chi2 = 0.9243

. vif

Variable	VIF	1/VIF
mnqf	7.27	0.137534
agrf	4.92	0.203285
trcf	3.85	0.259804
acbf	3.01	0.332262
resf	1.89	0.527871
mfpf	1.37	0.727635
foac	1.33	0.753928
Mean VIF	3.38	

. estat archlm

LM test for autoregressive conditional heteroskedasticity (ARCH)

lags(p)	chi2	df	Prob > chi2
1	0.663	1	0.4156

H0: no ARCH effects vs. H1: ARCH(p) disturbance

. estat dwatson

Durbin-Watson d-statistic(8, 22) = 2.307694

. estat durbinalt

Durbin's alternative test for autocorrelation

lags(p)	chi 2	df	Prob > chi 2
1	0.468	1	0.4938

H0: no serial correlation

. estat bgodfrey

Breusch-Godfrey LM test for autocorrelation

lags(p)	chi 2	df	Prob > chi 2
1	0.765	1	0.3818

H0: no serial correlation

.

. arima gdp acbf agrf mnqf mfpf resf trcf foac

(setting optimization to BHHH)

Iteration 0: log likelihood = 13.453894

Iteration 1: log likelihood = 13.453894

ARIMA regression

Sample: 1992 - 2013

Number of obs = 22

Wald chi 2(7) = 854.77

Log likelihood = 13.45389

Prob > chi 2 = 0.0000

gdp		Coef.	OPG Std. Err.	z	P> z	[95% Conf. Interval]	
gdp	acbf	.3672176	.0908442	4.04	0.000	.1891662	.5452689
	agrf	.4639034	.3329602	1.39	0.164	-.1886866	1.116493
	mnqf	-.1031499	.3377212	-0.31	0.760	-.7650712	.5587715
	mfpf	-1.243563	.3302848	-3.77	0.000	-1.890909	-.5962165
	resf	.119808	.3319374	0.36	0.718	-.5307774	.7703933
	trcf	.8550418	.2317801	3.69	0.000	.4007611	1.309322
	foac	.2298159	.1212673	1.90	0.058	-.0078636	.4674954
	_cons	12.35748	2.22128	5.56	0.000	8.003853	16.71111
/sigma		.1312726	.0243217	5.40	0.000	.083603	.1789422

.