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Effect of Financial Reforms on Productivity of Small Businesses in Nigeria

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Abstract

Over the years, successive Governments in Nigeria have embarked on various financial reforms towards revolutionising businesses, stimulate industrialization and boost the economy in Nigeria. These reforms cut across all financial indicators. Thus, this study investigates the effect of financial reforms on productivity of small businesses in Nigeria, with specific focus on interest rate and exchange rate reforms, as they affect productivity of small business. To achieve this, the study employed secondary data of interest, exchange rates and national output/productivity data from 1986-2017, which were analysed using time series analysis, while posited hypotheses were tested using the Ordinary Least Squares (OLS) multiple linear regression technique. The findings revealed that, calculated P-value INTR 0.1384>0.05, which implied that various reforms on interest rate has no significant positive effect on the productivity of small businesses in Nigeria, and the calculated P-value for exchange rate indicted EXCR 0.3354>0.05, implied that various reforms on exchange rate has no significant effect on the productivity of small businesses in Nigeria. The study therefore recommended that, the Central Bank of Nigeria should make concerted effort to ensure that monetary policy direction of interest rate maintain a lower interest rate for deposit money banks between 5% and 9% down from the current 22%, in order to reduce the interest rate charged by deposit money banks on loans and advances, lower the cost of capital, increase investment, stimulate productivity to ensure survival and growth of small businesses in Nigeria.

Keywords: *Interest Rate, Exchange Rate, Financial Reform, Productivity, Small Business*

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Background to the Study

Over the years, the issue of financial reforms has taken the centre stage in the world economy. Both developed and developing countries have tried to bring about reforms in their financial sectors and other sectors in order to influence the growth of either the entire economy or a sub-sector of the economy such as small businesses (Akpaeti, 2012). In most developed countries, in order to improve monetary management as well as the quality of financial intermediation, the authorities started a far-reaching financial reform programme. These reforms were started under the macroeconomic and financial sector restructuring guidance of the International Monetary Fund (IMF) (IMF, 2008). The objectives of these reforms were to reduce government intervention and strengthen the role of market forces in allocation of resources, improve the capacity of financial institution, for domestic resources mobilization efforts, enhance the effectiveness of monetary policy instruments and promote competition amongst businesses (IMF, 2008). Base on this, as with any reform efforts, financial reforms tend to produce good outcomes in the long run, but often produce dismal outcomes in the short run.

Accordingly, in Nigeria, the importance of a financial reform became more evident as a result of the background of economic or business problems, including stagnant growth, rising inflation, unemployment and food shortages and mounting external debt, which confronted the country since the early 1980's. The sharp reduction in crude oil prices resulted in deterioration in government's finances and foreign exchange earnings (Ojo, 2010). As the country plunged into economic recession, the initial policy response was the adoption of stringent austerity measures in 1982. Stricter measures were imposed in subsequent years as the economic situation worsened. The measure relied largely on complex administrative controls, which brought in their wake additional costs, such as fraudulent malpractices and corruption of officials administering the stringent control measures, particularly the import licensing allocation of foreign exchange. These had negative rather than desired positive recovery effects, since the problems worsened as it became difficult to procure machineries and materials, thus resulting in extensive plant closures, drop in capacity utilization, productivity and employment rates (Ojo, 2010)

As these problems became more unmanageable, the government in July 1986 launched the Structural Adjustment Programme (SAP) that had economic and financial deregulation as a major feature. As stated by Olomola (1994), SAP was designed to restructure and diversify the productive base of the economy, achieve fiscal balance, balance of payment equilibrium, intensify growth potential of the private sector and set the economy on the path of steady and balanced growth. A major blank of this programme is the restructuring of the fiscal sector and the liberalization of the control and regulation of financial institutions and markets.

The second categorization of reforms was seen in Interest Rate and Monetary Policy reforms starting with the deregulation of interest rate in the year 1987, and in 1989, Auction market for government securities was introduced as well as the continued use of direct monetary policy instruments (cash reserve requirements). In 1990, stabilization

securities for liquidity management was introduced, and in 1991 interest rate controls was reintroduced with the removal of interest rate controls i.e. Liberalization of bank credit market in 1992. And lastly, the Introduction of indirect monetary instruments (open market operations), re-imposition of interest controls as part of review of Central Bank operations, continuation of interest controls initiated fiscal reforms, and retention of interest controls (Omakhanlen, 2012).

In line with the above therefore, the government of Nigeria like every other government across the continents of the world has been formulating policies and strategies aimed at growing their economy through various sectors. To this end, various financial reforms, programmes and schemes have been designed and implemented (Omakhanlen, 2012). The policy reform frameworks designed primarily aimed at empowering and supporting small and medium businesses to improve or increase the level of productivity of businesses that has been dying or that has remained stagnant over the years. It is on the foregoing background that this study sets out to examine the effect of financial reforms (exchange rate, interest rate) and business growth in Nigeria.

Statement of the Problem

With various financial reforms being put in place, providing business solutions for growth and development of business is commonly expected as enterprises are able to grow from being small sized firms to medium, large and sustainable business entities. Nevertheless, this very critical objective seems far from reality as far as businesses in Nigeria are concerned. According to the National Bureau of Statistics (2012), of every five new business start-ups, about three fail within the first few months of operation due to lack of accessible credit and inadequate finances to acquire technological capability for business growth. The irony of it is that the same problems that lead to failure of businesses are the solutions that the financial reforms seemingly provide, so far without much success. Why has reforms failed to achieve the desired objective of business productivity in Nigeria? Are these reforms not suitable for the Nigerian environment or are these results due to implementation strategies? These among several unanswered questions constitute the statement of the problem.

In spite of financial reforms, programmes and efforts towards revolutionising business in Nigeria and stimulate industrialization, small and medium enterprises still experience stagnant or abysmal growth with many businesses still declining. This study explores the mitigating factors that have prevented small business productivity for so long despite various reforms.

Research Question

Based on the identified problem stated above, attempt will be made to answer the following research question;

i. What is the effect of interest rate reforms on the productivity of small businesses in Nigeria?
ii. What is the effect of exchange rate reforms on the productivity of small businesses in Nigeria?

Objectives of the Study

The broad objective of this study investigates the implications of financial reforms (interest rate, and exchange rate) on productivity of small and medium enterprises in Nigeria; specifically stated as:

i. evaluate the effect of interest rate reforms on the productivity of small businesses in Nigeria
ii. examine the effect of exchange rate reforms on the productivity of small businesses in Nigeria

Statement of Hypotheses

In order to achieve the specific objectives, the following null hypotheses will be formulated;

H_{01}: Interest rate reforms have no significant positive effect on productivity of small businesses in Nigeria.

H_{02}: Exchange rate reforms have no significant positive effect on productivity of small businesses in Nigeria

Literature Review

Financial Reforms: Interest Rate Reforms

Two major polices of interest rate management are interest rate regulation and interest rate reform. Interest rate regulation often embodies the practice of interest rate repression and entails the use of quantitative or administrative controls by the monetary authorities to influence the magnitude as well as direction of credit (Okoye, Nwakoby & Modede, 2015). A characteristic feature of the regulated regime is maintenance of interest rate at levels lower than the rate of inflation (interest rate repression) (Bawuah, Yakubu & Alhassan, 2014). Repression of interest rate targets maintenance of low and negative real interest rates to support economic growth through provision of cheap finance (credit) to industry operators. On the other hand, interest rate reform refers to liberalization of the framework for interest rate determination (Craig, 2000 in Jelilov, 2016). The market forces of demand and supply direct movement of interest rate during a liberalized or reformed policy regime. Interest rate levels under the regime reflect the inflationary trend in the economy and are therefore often perceived to be high, particularly in the developing economies that are characterized by high inflation rates (Ebirigan, 2012 in Jelilov, 2016). Liberalization policy aims at promotion of effective deposit mobilization and efficient allocation of funds to achieve output growth (Okoye, et al., 2015).

Prior to financial sector deregulation in Nigeria under the Structural Adjustment Programme (SAP) adopted in 1986, Ogar, Eja and Gbenga (2018) averred that, the monetary policy of the government was development-oriented as banks were required to lend at concessionary rates to priority sectors like agriculture and manufacturing. The policy thrust of the government was to promote businesses growth by offering low rates

of interest on loans to the sectors. Interest rate regulation during the period ensured that the spread between deposit and lending rates was maintained within the specified limits (Bawuah, et al., 2014). Interest rates were largely managed or fixed below the rate of inflation in the economy; however, the policy regime, which fixed interest rates below inflation rate (interest rate repression), failed to deliver on government's economic objective of business sector growth (Adebiyi, 2002). This assertion was alluded to by then Nigerian Military President, Gen. Ibrahim. B. Babangida who explained that pegging of interest rate, contrary to expectation, did not achieve its desired objective of stimulating new investments (Sawaya & Bhero, 2017), nor did it result in increased capacity utilization (Federal Government Budget Speech, 1987). With the introduction of SAP in 1986, the mechanism for interest rate management was liberalized thereby setting the stage for a transition from fixed to market-determined interest rate regime (Adofu, Abula & Audu, 2010). Under SAP, the banking sub-sector witnessed wider spreads between deposit rates and lending rates. Interest rates became positive in real terms, as they rose above inflation rates for most part of the period (Adebiyi, 2002). Bank lending in the liberalized Nigerian financial sector was hardly extended to promotion of new investments, expansion of existing real ventures and promotion of exports but were rather diverted to foreign exchange trading which banks consider a vibrant and profitable activity (Ogunleye, 1999).

Issues of effective interest rate management have featured prominently in government monetary and fiscal policy considerations aimed at achieving enhanced and sustained economic growth (Nwandu, 2016). Towards an effective management of interest rate in Nigeria, the monetary authorities have adopted two major policies on interest rate. First, in the post-independence period, the policy thrust was to keep interest rates as low as possible, often below the rate of inflation (interest rate repression), to enable the government and private sector operators borrow cheaply to fast-track the process of economic growth and development (Kisseih, 2017). Basic features of the regime (which lasted until the mid-1980s) include the use of administrative controls such as the introduction of ceilings on interest rates and prioritization of certain sectors of the economy so as to control the volume and direction of credit flow in the economy. However, this policy failed to achieve its underlying objectives and was discontinued in 1986 (Okoye, et al., 2015). Owing to the rising trend in interest rate (particularly lending or loan rate) since the introduction of SAP, business sector operators like manufacturers have continued to cry aloud over the negative impact of lending rate on their operations (Ogar, et al., 2018). The Manufacturers Association of Nigeria (MAN) have on occasions attributed the low rate of capacity utilization in the sub-sector to high lending rates, among other factors (MAN Economic Review, 2003-2006, 2009)

Exchange Rate Reforms

The core of exchange rate reforms is the stimulation of the growth of exports beyond that of imports with a view to an overall improvement in the trade balance and business growth. The theoretical impact of exchange rate reforms on business trade is still highly controversial (Agbola 2004). Foreign exchange operations in Nigeria have been

influenced by a number of factors such as the changing pattern of international trade, institutional changes in the economy and structural shifts in production (Clement, 2014). Before the establishment of the Central Bank of Nigeria (CBN) in 1958, and the enactment of the Exchange Control Act of 1962, foreign exchange was earned by the private sector and held in balances by foreign commercial banks acting as agents for local exporters. The boom experienced in the 1970s made it mandatory to manage foreign exchange resources in order to avoid scarcity (Omojimite & Akpokodje, 2010). However, shortages in the late 1970s and early 1980s compelled the government to introduce some ad-hoc measures to control excessive demand for foreign exchange. However, it was not until 1982 that comprehensive exchange controls were applied.

The increasing demand for foreign exchange at a time when the supply was shrinking encouraged the development of a flourishing parallel market for foreign exchange. Because the exchange control system was unable to evolve an appropriate mechanism for foreign exchange allocation in consonance with the goal of internal balance (Abdallah, 2016), it was discarded on September 26, 1986 while a new mechanism was evolved under the Structural Adjustment Programme (SAP) introduced in 1986 (Harley, 2018). The main objectives of exchange rate policy under the SAP were to preserve the value of the domestic currency (Lawal, 2016), maintain a favourable external reserves position and ensure external balance without compromising the need for internal balance and the overall goal of macroeconomic stability (Onyeizube & Umeagugesi, 2014). A transitory dual exchange rate system (first and second-tier - SFEM) was adopted in September, 1986, but metamorphosed into the Foreign Exchange Market (FEM) in 1987 (Omojimite & Akpokodje, 2010).

Bureaux de Change was introduced in 1989 with a view to enlarging the scope of the FEM. In 1994, there was a policy reversal, occasioned by the non-relenting pressure on the foreign exchange market. Further reforms such as the formal pegging of the naira exchange rate, the centralisation of foreign exchange in the CBN, the restriction of Bureau de Change to buy foreign exchange as agents of the CBN, etc. were introduced in the Foreign Exchange Market in 1994 as a result of volatility in exchange rates (Belghitar, Clark & Wali, 2016). There was another policy reversal in 1995 to that of "guided deregulation". This necessitated the institution of the Autonomous Foreign Exchange Market (AFEM), which later metamorphosed into a daily, two-way quote Inter- Bank Foreign Exchange Market (IFEM) in 1999 (Ugwu, 2017). The Dutch Auction System (DAS) was reintroduced in 2002 as a result of the intensification of the demand pressure in the foreign exchange market and the persistence in the depletion of the country's external reserves (Aliyu, 2011). The DAS was conceived as a two-way auction system in which both the CBN and authorised dealers would participate in the foreign exchange market to buy and sell foreign exchange (Omojimite & Akpokodje, 2010). Accordingly, as part of the reforms, the foreign exchange market was liberalized with the reintroduction of the Dutch Auction System (DAS) in July 2002 with the objectives of realigning the exchange rate of the naira, conserving external reserves (Tams-Alasia, Olokoyo, Okoye & Ejemeyovwi, 2018), enhancing market transparency and curbing capital flight from the

country. Under this system, the Bank intervened twice weekly and end-users through authorized dealers bought foreign exchange at their bid rates (Okoye, Modebe, Okoh & Ahmed, 2018). The rate that cleared the market (marginal rate) was adopted as the ruling rate exchange rate for the period, up to the next auction. DAS brought a good measure of stability in exchange rate as well a reduction in the arbitrage premium between the official and parallel market rates (Lawal, 2016; Obokoh, Ojiako, Monday & Ehiobuche, 2017).

Productivity as an Indicator of Business Growth

The concept of productivity, generally defined as the relation between output and input, has been available for over two centuries and applied in many different circumstances on various levels of aggregation in the economic system. It is argued that productivity is one of the basic variables governing economic production activities, perhaps the most important one (Singh, Motwani & Kumar, 2000). However, productivity is seen as one of the most vital factors affecting business' competitiveness (Kinnander & Gröndahl, 1999) and growth. Productivity is one of the key determinants of high and sustained business growth and in fact a key determinant of long term growth. It remains a vital economic driver for developed and developing countries and would play a critical role in measuring the success of small, medium and large scale business enterprises globally. Globally, the small and medium business sector contributes substantial level of revenue while increasing real income (Christiaensen & Demery, 2007). It not only employs an estimated 70 percent of the work-force in low income countries, and also a major contributor to Gross Domestic Product (GDP) estimated at approximately 30 percent (The World Bank, 2007). Productivity according to Olayemi (2012) is defined as the index of the ratio of the value of total output to the value of the total inputs used in the agro related production. Productivity is measured by analysing records of production volume by product line, type and production time (Adamides & Mead, 2006), while the productivity of the main processing lines is compared with data for main competitors where possible (Palamarchuk, 2010).

The argument that firm growth causes higher productivity is based on the assumption that economies of scale exists; meaning that firms experience a decline in average costs as output increases (Amulu, 2014). The flaw in this argument becomes clear when one considers that SMEs tend not to operate in industries where economies of scale are present, precisely because these are not industries where they are likely to be competitive. On the other hand, economic theory supports the premise that higher productivity causes small and medium enterprise growth, since productivity can be a source of competitive advantage such as low cost production (Nichter, 2004). Adopting the framework presented above and its treatment of the role of capabilities in small and medium enterprise growth, the causal model would go something like this: factors such as education and experience can directly increase the capabilities of SMEs overs and employees; these individuals are then more likely, to adopt or create practices that heighten productivity levels, and this added productivity then contributes to growth. In reality, both of the arguments presented above appear to hold some truth (Amulu, 2014).

Empirical Review

Ogar, Eja, and Gbenga (2018) investigated the relationship between interest rate and the manufacturing sector performance in Nigeria from the period 1981-2016. The wide interest rate spread and the irregular contribution of manufacturing sector to Gross Domestic Product in Nigeria necessitated this study. The study employed time series secondary data which were sourced from the central bank of Nigeria (CBN) statistical bulletin. The study applied several estimation techniques such as unit root to test for the stationarity, the Johanson cointegration test to verify long run association among the series and the vector error correction model as a verification of the short run adjustment. The results established the existence of a long run relationship among the variables; the results equally confirmed a negative but significant relationship between lending rate and manufacturing output in Nigeria. A positive but insignificant relationship between deposit rate and the manufacturing sector output was observed. Short run association between the variables was equally recorded. Bases on the findings, the study therefore recommends, that the Government through the central bank of Nigeria should develop strategies and policies geared at reducing the wide interest rate spread among commercial banks in Nigeria.

Harley (2018) investigated the impact of exchange rate fluctuations on firm's performance in Nigeria. The study posited seven research questions which led to the test of seven hypotheses. The major objective of the study was to empirically investigate the impact of exchange rate fluctuations on return of investment. The study made use of descriptive and ordinary least square methodology. The scope of the study was 2012 to 2016 on a panel data. The finding revealed that, exchange rate plays a significant impact on Return on Investment as most of the banks are involved in exchange rate transactions. The regression result showed a positive relationship between Return on Investment and exchange rate of 145.4265. This implied that a unit increases in exchange rate of 145.4265 will bring about a rise of 145.4265 in Return on Investment. Since the T- calculated value in the study is 0.287 which is compared to 0.05 i.e. 287>0.05 the null hypothesis was rejected and the alternative hypothesis accepted that there is a significant relationship between exchange rate and return on investment (firm's performance). In the regression result, the coefficient of determination is very high. It shows that about 67 percent of the total variations in Return on Investment (ROI) are explained by all the independent variables in the model.

Nwandu (2016) examined the effect of rising interest rates on the performances of the Nigerian manufacturing sector. Data for the study spans thirty-five (35) years covering 1981 to 2015. The models were analysed using the ordinary least squares. Findings from the study shows that rising interest rate in Nigeria has a negative effect on the contribution of the manufacturing sector to GDP as well as on the average productivity of the Nigerian manufacturing sector. This implies that the rising interest rate in Nigeria impedes the activities and the performances of the Nigerian manufacturing sector. Given these findings, the study recommended that aside from trying to manage interest rate for enhanced economic growth, the Nigerian Government should strive to provide

infrastructural facilities particularly power and transportation to reduce the high cost of production. Also, Jelilov (2016) examined the impact of interest rate on economic growth in Nigeria from 1990 to 2013. The result found that the interest rate has a slight impact on growth; however, the growth can be improved by lowering the interest rate which will increase the investment. As a result, the study recommended that Nigerian authorities should set interest rate policies that will boost the economic growth. Hence, proper measure should be taken in order to have a more rapid economic growth.

Okoye, Nwakoby and Modebe (2015) examined the extent to which movements in lending or loan rate and its major determinants like exchange rate, inflation rate and financial depth (independent variables) account for the trend in output performance of Nigeria's industrial sector (dependent variable). Annual data on the variables, sourced from the publications of the Central Bank of Nigeria, were analysed using the analytical technique of the vector error correction model (VECM). The study showed evidence of significant positive impact of lending rate and financial depth on industrial output growth. To enhance the productivity of the sector in Nigeria, government should seek to reduce the very high interest rates and stabilize exchange rate movements to boost domestic production capacity.

Ugwu (2017) investigated the impact of exchange rate fluctuation on the performance of manufacturing firms in Nigeria using firms' profitability as a proxy for performance within the periods 1986 to 2016. The estimation technique adopted for the study was multiple regression method based on Ordinary Least Squares technique. However, in order to avoid the incidence of spurious estimates, evidence from the ADF test conducted revealed that the variables are integrated of order two, 1(*1*). The Johansen test conducted showed evidence of long run equilibrium relationship between Exchange rate fluctuation and the profitability of manufacturing firms in Nigeria. Findings showed that there is a statistical significance between Exchange rate fluctuations on the profitability of manufacturing firms in Nigeria as shown by the joint variation of the *T* and *F* test and their respective *P*-values. It therefore recommended that Government should stimulate export diversification in the area of agriculture; agro-investment, and agro-allied industries, oil allied industries such that will improve Exchange rate fluctuations on improving basic amenities like electricity, transportation, telecommunication, water supply, human resource development, instead of implementing policies in an unhealthy economic and social structure.

Abdallah (2016) examined the effect of exchange rate variability on manufacturing sector performance in Ghana. Using time series data from the period 1986-2013 and employing the autoregressive distributed lag (ARDL) approach, the empirical results showed that there exists both a short as well as long run relationship between exchange rates and manufacturing sector performance. Thus, in Ghana as the exchange rate appreciates, the manufacturing sector performance improves and as it depreciates, the sector is adversely affected. In view of this, it is recommended that policy should be put in place to regulate the importation of goods that could be locally produced so as to improve the performance

of the manufacturing sector. In addition, the government should ensure that there is regular electricity supply, good roads, water and a reliable telecommunication system so that the manufacturing sector can perform effectively and efficiently in order to achieve a considerable rate of economic growth.

Lawal (2016) examined the effect of exchange rate fluctuations on manufacturing sector output in Nigeria from 1986 to 2014, a period of 28 years. Data sourced from Central Bank of Nigeria (CBN) statistical Bulletin and World Development Indicators (WDI) on manufacturing output, Consumer Price Index (CPI), Government Capital Expenditure (GCE) and Real Effective Exchange Rate (EXC) were analyzed through the multiple regression analysis using Autoregressive Distribution Lag (ARDL) to examine the effect of exchange rate fluctuations on manufacturing sector. Using ARDL it was discovered that exchange rate fluctuations have long run and short run relationship on manufacturing sector output. The result showed that exchange rate has a positive relationship on manufacturing sector output but not significant. However, from the empirical analysis it was discovered that exchange rate is positively related to manufacturing sector output. The study recommended that government should implement the policies on export strategies to encourage exports and discourage imports in order to achieve a favourable balance of payment; encourage the use of domestic materials in production in order to encourage international competitiveness and also increase expenditures on economic services such as manufacturing so as to increase their output

Nyumba, Muganda, Musiega and Masinde (2015) evaluated the effect of loan interest rate on the performance of small and medium size enterprises in Lurambi Sub-County, Kenya. The study population comprised of all microenterprises in Lurambi Sub- County, from which a representative sample of 365 SME owner/managers will be selected as respondents. The data for the study was collected by use of questionnaire. Cronbach's Alpha of coefficient test will be used to determine the reliability while test-retest and data triangulation technique was used to determine the validity of the instruments. The empirical analysis of the study was conducted using both descriptive. The correlation of the mean of credit limit and mean of performance had a beta term 3 = 0.815, P=0.01. The value of beta was positive and significant. Basing on this value, it therefore implies that there exists a statistically significant positive effect of loan interest rate on the performance of SME's in Lurambi Sub-County, Kenya. From the results, 8.3% of performance of SMEs can be explained by reduction in interest rate (r2 = 0.083) and the relationship followed a simple regression model of the nature P= > - 32INR +e where P is the performance of SME's, > is the constant intercept of which in my case is 3.615 and beta 32= - 0.289, IR is the interest rate and D is the standard error term which is 0.69410.The findings of the study forms a basis for the formulation of policies relating to bank lending and future funding programs and schemes.

Theoretical Framework: Financial Growth Theory

The theoretical framework found adequate for this study is the finance growth theory. Berger and Udell (1998) propose a financial growth theory for small businesses where the financial needs and financing options change as the business grows, becomes more experienced and less informationally opaque. They further suggest that firms lie on a size/age/information continuum where the smaller/younger/more opaque firms lie near the left end of the continuum indicating that they must rely on initial insider finance, trade credit and/or angel finance. The growth cycle model predicts that as firm grows, it will gain access to venture capital (VC) as a source of intermediate equity and mid-term loans as a source of intermediate debt. At the final stage of the growth paradigm, as the firm becomes older, more experienced and more informationally transparent, it will likely gain access to public equity (PE) or long-term debt.

Problems related to financing are dominant in the literature with regard to small firms. There are numerous empirical studies describing inadequate financing as the primary cause of MSMEs' failure (Coleman, 2000; Owualah, 2007). The capital structure of smalls firm differs significantly from larger firms because small firms rely more on informal financial market, which limits the type of financing they can receive. The small firm's initial use of internal financing creates a unique situation in which capital structure decisions are made based on limited financing options. It is widely accepted that small firms have different optimal capital structures and are financed by various sources at different stages of their organizational lives (Berger & Udell, 1998). Researchers have found that certain attributes of small firms influence the type of funds available to finance the firm's operations (Romano et al., 2001). Angel financing is a type of microfinance where an individual or a corporate organization raises limited amount of capital for a micro entrepreneur at start up or for expansion with less stringent conditions for repayment. The expected rate of return on investment is usually very low but high enough to offset risk.

Methodology

This study adopted the expo-facto research design, because the events of study had already taken place and it is also secondary in nature. This design is also applicable to studies geared toward ascertaining the cause–effect association between the independent and dependent variables (Onwumere, Onodugo & Ibe, 2013). Determining cause–effect relationships among the selected variables will be the major aim of this study. The population of this study comprises 31 years data on indicators of the independent variable, financial reforms, being interest rates and exchange rates. Also, data on indicator of the dependent variable business growth of the Small and Medium Enterprises sub-sector in Nigeria, being sectoral productivity, from 1986 to 2017 (32 years), forms the population of the study. The data employed in this research work consist mainly of secondary data relevant to the study, and were sourced from published sources. The published sources include data on Small and Medium Enterprises Development Agency in Nigeria (SMEDAN), Central Bank of Nigeria (CBN) statistical bulletin of various editions, National Bureau of Statistics, factsheets, journals, magazines, newspapers, internet and other relevant publications.

Techniques for Data Analysis and Model Specification

Secondary data collected were analysed using time series analysis, while posited hypotheses were tested using the Ordinary Least Squares (OLS) multiple linear regression technique. The decision rule for accepting or rejecting the null hypothesis for any of these tests is 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. A times series multiple regression model was employed to show the relationship between the dependent variables (Productivity (PRD) and the independent variables (Financial Reforms) which are Exchange rate (EXCR) and Interest rate (INTR). The data used for the empirical analysis covers the study period of 1986 – 2017, were collected from secondary sources. The multiple regression model used for this study is stated thus:

Dependent Variable

Y = Productivity

Productivity = f(PRD)

Independent Variable

X = Financial Reforms

Financial Reforms = f(INTR, EXCR)

The functional form of the econometric model is therefore given as:

$Y = F(X_{1,} X_2)$ … (1)

Where, Y is Productivity (Dependent variable)

x_1 to x_3 are independent variables or explanatory variables.

F = represents the functional notation.

The explicit form of the model for the three hypotheses are stated thus:

$PRD_t = \alpha_0 + \alpha_1 EXCR_t + \alpha_2 INTR_t + V_t$ … (2)

Where:

PRD_t = Sectoral Productivity at time *t*

$EXCR_t$ = exchange rate at time *t*

$INTR_t$ = Interest Rate at time *t*

$\alpha_{0,} \lambda_0$ and β_0, = Regression Constant,

$\alpha_{1,} \lambda_{1,} \beta_1$ to $\alpha_3 \lambda_3 \beta_3$ = Coefficients of Explanatory Variables,

U, V and W = Error Term.

Results and Discussions

Model Estimation

The models used in this study were estimated using Eviews version 9, to show the relationship between the independent variables and the dependent variables. Before estimating the parameters, unit root and co-integration tests was carried out on the data

to determine their stationarity. To test for unit root and co-integration, both the Phillip-Perron and Augmented-Dickey-Fuller (ADF) were used. This is to test to know if the data used are stationary or not. Most times series data have the tendency of being non-stationary.

Unit Root Test

Before estimating the time series regression analysis, a unit and co-integration tests are performed on the data of the variables. Co-integration and unit root test is used to test the validity and reliability of the data used for this research. Economic theory requires that variables be stationary (that is, the variables should have long term, or equilibrium relationship between them) before the application of standard econometric technique (Gujarati 2004). This is to avoid misleading result.

Table 1: Unit root result of variables at first level difference

Variable	1st diff	ADF	Table value	Remark
PRD	I(1)	-6.79	-1.95	No Unit Root @ 5% sig level
EXCR	I(1)	-2.52	-1.95	No Unit Root @ 5% sig level
INTR	I(1)	-7.22	-1.95	No Unit Root @ 5% sig level

Table 1 above shows the unit root for the variables. Augmented Dickey Fuller method was used. The Augmented Dickey Fuller test shows that all the variables were stationary at the first difference.

Co-integration

Two or more variables are said to be cointegrated if they exhibit a long run equilibrium relationship, though in the short run, they may drift apart (Engle & Granger, 1987). The Johansen and Juselius (1990) maximum likelihood testing procedure would be used in testing for cointegration in this study. The Johansen-Juselius method provides a unified framework for the estimation and testing of cointegrating relations in the context of vector error correction models. Cointegration analysis provides a powerful discriminating test for spurious correction. The Johansen-Juselius method suggests two statistics in the determination of the number of cointegrating vectors: the trace statistics and the maximum Eigen values.

Table 2: Max-Eigen and Trace Statistics Cointegration

Date: 02/06/19 Time: 10:34				
Sample (adjusted): 1988 - 2017				
Included observations: 30 after adjustments				
Trend assumption: Linear deterministic trend				
Series: PRD EXCR INTR				
Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.805960	95.75366	105.9025	0.0831
At most 1	0.615554	56.71175	69.81889	0.3499
At most 2	0.344610	28.03321	47.85613	0.8123
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.805960	40.07757	49.19079	0.3006
At most 1	0.615554	28.67854	33.87687	0.1839
At most 2	0.344610	12.67573	27.58434	0.9021
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

From the result in table 2, the Trace statistics stated that from the first hypothesis which is r=0 and r ≥ 0. The result from the Trace result indicated that 95.75 is less than the critical values 105.90 also for the second, the Trace statistics value 56.71 is less than the critical value at 69.82 at 0.05 level of significance. Similarly, the Max-Eigen statistics conforms to the result of the Trace statistics. This means that there is no cointegration. Since there is no cointegration, there is no long-run relationship

Table 3: Presence of Multicollinearity

Variance Inflation Factors			
Date: 01/02/19 Time: 14:47			
Sample: 1986 - 2017			
Included observations: 32			
	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
EXCR	0.000493	7.123936	2.841651
INTR	0.046834	23.48821	1.004887
C	44.36506	42.24148	NA

The variance inflation factor for a predictor indicates whether there is a strong linear association between one predictor and the remaining predictors. The correlation in a situation in which two or more explanatory variables in a multiple regression are highly and linearly related, it renders one of the affected variables redundant and non-effective on the dependent variable. It is observed that in table 3, the model collinearity diagnosis reveals that there is no multicollinearity because the VIF values are well below 10.

Table 4: Regression result of the three models

Variables	**Model 1**
D(EXCR)	-0.072009
D(INTR)	-0.450813
Constant	-0.083324
N	31
R^2	0.137434

Dependent variables **D(PRD)**

Table 4 shows the result of the short-run OLS (Multiple Linear Regression). The result was estimated with the software EVIEWS 9. The output in table 4 is interpreted as follows:

The value of the intercepts for model 1 showed that ***model* 1** (-0.083324) is negative, which represents the predicted value when all the independent variables are equal to zero. This implies that without any effect of financial reforms, the business productivity is negative at the period under study. The coefficient of exchange rate shows that the value for ***models* 1** (-0.072009) shows that exchange rate negatively affects productivity by 7%. The coefficient value of INTR shows that the values for ***model*** 1 (-0.450813) indicate that interest rate negatively affects business productivity of small business sector at 5%. The value pointed out that the relationship is insignificant. An optimum interest rate will bring about a decrease in sectoral productivity 45.08%. This implies that better reformed

financial policies and institutions in Nigerian will bring about positive impact on sectoral productivity. Finally, the coefficient of determination for the models r^2= 0.1374 shows that a 13.74% change in productivity in Nigeria is as a result of the changes in financial reform variables such as exchange rate and interest rate.

Test of Hypotheses

H_{01}: Interest rate reforms have no significant positive effect on productivity of small businesses in Nigeria.

H_{02}: Exchange rate reforms have no significant positive effect on productivity of small businesses in Nigeria

Decision Rule: If the p value is less than the level of significance of 0.05, the null hypothesis is rejected while the alternate hypothesis is accepted. If the p value is greater than the significance level of 0.05, the null hypothesis is accepted and the alternate hypothesis is rejected. Reject $\mathbf{H_0}$ if P < 0.05 or Accept $\mathbf{H_0}$ if P > 0.05

Table 5: Regression Result on effect of financial reforms on productivity of small businesses in Nigeria

Model 1: $PRD_t = \alpha_0 + \alpha_1 EXCR_t + \alpha_2 INTR_t + V_t$ ……. (1)

Dependent Variable: D(SPRD)				
Method: Least Squares				
Date: 02/06/19 Time: 10:29				
Sample (adjusted): 1987 - 2017				
Included observations: 31 after adjustments				
HAC standard errors & covariance (Bartlett kernel, Newey-West fixed				
bandwidth = 4.0000)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXCR)	-0.072009	0.073414	-0.980859	0.3354
D(INTR)	-0.450813	0.295198	-1.527154	0.1384
C	-0.083324	2.419666	-0.034436	0.9728
R-squared	0.137434	Mean dependent var		-0.303226
Adjusted R-squared	0.041593	S.D. dependent var		13.58811
S.E. of regression	13.30252	Akaike info criterion		8.133698
Sum squared resid	4777.839	Schwarz criterion		8.318729
Log likelihood	-122.0723	Hannan-Quinn criter.		8.194013
F-statistic	1.433985	Durbin-Watson stat		2.218371
Prob(F-statistic)	0.254670	Wald F-statistic		1.445901
Prob(Wald F-statistic)	0.251383			

Source: Author's Computation, 2019 (E-views 9.0)

PRD = -0.08 + -0.07 EXCR + -0.45 INTR …….. (2)
SEE = 2.42: 0.07, 0.29
P value = 0.97: (0.34; 0.14; 0.19)
Prob (F-statistic) = 0.254670
Prob (Wald F-statistic) = 0.251383

For hypothesis one, the Table shows calculated p-value for Interest rate reforms indicated by INTR 0.1384 (PRD model); while the level of significance is 0.05. Since the calculated p-value (INTR 0.1384 > 0.05) is greater than the level of significance (0.05), this implies that, the Interest rate (INTR) as an indicator of financial reforms is insignificant and not different from zero. The conclusion is that we accept the null hypothesis (H_{01}) and reject the alternate hypothesis. Hence, we conclude that interest rate reforms have no significant positive effect on the productivity of small businesses in Nigeria.

For hypothesis two, the Table shows the calculated p-value for exchange rate financial reform, indicated EXCR 0.3354 (PRD model); while the level of significance is 0.05. Since the calculated p-value (EXCR 0.3354 > 0.05) is greater than the level of significance (0.05), this implies that, (EXCR) of financial reforms is insignificant and not different from zero. The conclusion is that we accept the null hypothesis (H_{02}) and reject the alternate hypothesis. Hence, we conclude that exchange rate reforms have no significant positive effect on the productivity of small businesses in Nigeria.

Discussion of Findings
From the regression result of hypothesis one as shown in Table 4.6, the calculated p-value for financial reforms represented by exchange rate (EXCR 0.3354 > 0.05), interest rate (INTR 0.1384 > 0.05) are all greater than the level of significance at 0.05 prompting the acceptance of the Null hypotheses (H_{01} & H_{02}) which implies that, interest rate and exchange rate reforms have no significant positive effect on the productivity of small businesses in Nigeria.

From the regression result of hypothesis one as shown in table 4.6, the calculated p-value for interest rate reforms (INTR 0.1384 > 0.05) is greater that the level of significance at 0.05, hence, there is no significant positive effect of interest rate on productivity of small businesses. This implies that, increased interest rates do not have positive effect on productivity, but negative effect. This is consistent with Ogar, et al., (2018) who investigated the relationship between interest rate and the manufacturing sector performance in Nigeria from the period 1981-2016. The results confirmed a negative but significant relationship between lending rate and manufacturing output in Nigeria; Jelilov (2016) whose result found that interest rate has a slight impact; Campbell and Asaleye (2016) whose study revealed that productivity of manufacturing sector dropped low in the post reform era. This is due to the fact that after each series of reforms, Nigeria has only witnessed continuous d appreciations of the exchange rate have a predominantly negative effect on returns for all SMEs, for all years and for all industries; and Charles (2012), who study revealed that lending rate, corporate tax, inflation and exchange rate have negative impact on the performance of the sub-sector in Nigeria.

Also, from the regression result of hypothesis two as shown in table 4.6, the calculated p-value for exchange rate reforms (EXCR 0.3354 > 0.05) is greater than the level of significance (0.05), this implies that, exchange rate financial reforms have no significant positive effect on the productivity of small businesses in Nigeria, which implies that, increased exchange rates do not have positive effect on productivity, but negative effect. The finding is consistent with Lawal (2016) who examined the effect of exchange rate fluctuations on manufacturing sector output in Nigeria from 1986 to 2014, of which the result showed that though exchange rate has no *significant* effect, but has a positive relationship on manufacturing sector output; and with Ugwu (2017) investigated the impact of exchange rate fluctuation on the performance of manufacturing firms in Nigeria using firms' profitability as a proxy for performance within the periods 1986 to 2016. Findings showed that there is a statistical significance between Exchange rate fluctuations on the profitability of manufacturing firms in Nigeria.

Conclusion and Recommendations

The importance of financial reforms in Nigeria cannot be overemphasized, owing to the fact that the reform objectives were to reduce government intervention and strengthen the role of market forces in allocation of resources, improve the capacity of financial institutions, for domestic resources mobilization efforts, enhance the effectiveness of monetary policy instruments and promote competition amongst businesses; consequently, the focus of this study on effects of financial reforms (interest rate and exchange rate) on productivity of small and medium enterprises in Nigeria. Therefore, on financial reforms and productivity of small businesses, the study concludes that interest rate and exchange rate reforms have no significant positive effect on the productivity of small businesses in Nigeria, which implies that high interest and exchange rates negatively affects the productivity of small businesses in Nigeria.

Based on the findings of the study, it is therefore recommended that,

1. Gradual and steady reduction on interest rate will serve as a booster to businesses in Nigeria most especially small businesses. The Central Bank of Nigeria should make concerted effort to ensure that monetary policy direction of interest rate maintain a lower interest rate of deposit money banks between 5% and 9% down from the current 22% in order to reduce the interest rate charged by deposit money banks on loans and advances, lower the cost of capital, increase investments, stimulate productivity to ensure survival and growth of small businesses in Nigeria.
2. The sustenance of stable exchange rate will guarantee confidence and attract investment in the Economy including FDI all this will dove-tail to affect positively the small businesses in Nigeria. It is also recommended that the government and policymakers should develop and implement exchange rate policies that are aimed at minimizing currency fluctuations in the country, to insulate that small business and manufacturing sectors productivity from the adverse effect of this exchange rate variability in Nigeria. The government should vigorously pursue policies aimed at stabilizing exchange rate movements to de-emphasize outflows of foreign exchange, in order to achieve an investments-friendly climate.

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