

AN EMPIRICAL INVESTIGATION OF THE IMPACT OF MICROFINANCE BANK LOANS AND ADVANCES ON NIGERIA'S INDUSTRIAL OUTPUT

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Abstract

The study empirically investigated the impact of microfinance bank loans and advances on industrial output in Nigeria. It made use of annual secondary data sourced from CBN statistical bulletin 2008 and 2014. The multiple regression model was adopted for the study while the Ordinary Least Squares (OLS) estimation technique was employed in the analysis via STATA 11.0 econometric software. The diagnostic test result showed that all the variables were stationary after first differencing. The regression analysis result showed that microfinance bank loans and advances had significant impact on industrial output in Nigeria as 1% increase in microfinance bank loans and advances brought about 0.25% increase in industrial output during the period under review. It also, indicated that government expenditure on health had significant impact on industrial output in Nigeria as 1% increase in microfinance bank loans and advances led to 0.51% increase in industrial output during the period under review. In the light of these findings, the study recommends that the Nigerian government should enforce policies that will reduce the cost of borrowing from microfinance banks and address institutional and infrastructural challenges facing these microfinance banks in Nigeria.

Introduction

Background to the Study

Sustained economic growth and development will only be a mirage anywhere in the world

without poverty alleviation and human capital development. Empowering the masses via access to credit facilities will not only boast productive economic activities, but increase overall employment opportunities, enhance personal household income and wealth creation. Therefore, an efficient and effective rural financial intermediation between the deficit and the surplus spending units will be a right step towards the achievement of these macroeconomic goals of sustained economic growth and development in Nigeria.

CBN (2005) in her article titled "Microfinance Policy, Regulatory and Supervisory Framework for Nigeria" observed that microfinance is about providing financial services to the poor who are traditionally not served by the conventional financial institutions. According to CBN, three features distinguish microfinance from other formal financial products. These include the smallness of loans advanced, the absence of asset-based collateral, and simplicity of operations.

Ojo (2009), made the submission that the goal of Micro Finance Institutions as development organization is to service the financial needs of the underserved market as a means of meeting development objectives.

Eventhough studies like that of (Ogujiuba, Fadila and Stiegheer, 2013; Musa and Aisha, 2012) have shown that SMEs account for well over half of the total share of employment sales and value added; SMEs constitute the most viable and veritable vehicle for self-sustaining industrial development in Nigeria, one of the greatest obstacles that Small and Medium Enterprises (SMEs) have been faced with is that of struggle with access to funds. This is further compounded by the fact that even where credit facilities are available, they

may not be able to obtain the required collateral to access such.

Nigerian government nevertheless, has made commendable efforts in ensuring efficient flow of financial services to the underserved market. Government financed rural credit programmes were established such as; Rural Banking Programme, sectoral allocation of credits, a concessionary interest rate, and the Agricultural Credit Guarantee Scheme (ACGS). Other institutional arrangements were the establishment of the Nigerian Agricultural and Co-operative Bank Limited (NACB), the National Directorate of Employment (NDE), the Nigerian Agricultural Insurance Corporation (NAIC), the Peoples Bank of Nigeria (PBN), the Community Banks (CBs), and the Family Economic Advancement Programme (FEAP). In 2000, the NACB, PBN, and FEAP were merged by the Nigerian government to form the Nigerian Agricultural Co-operative and Rural Development Bank Limited (NACRDB) to enhance the provision of finance to the agricultural sector. It also created the National Poverty Eradication Programme (NAPEP) with the mandate of poverty alleviation, Small Scale Industries Credit Scheme (SSIC), Industrial Development Centers (IDCs), National Directorate of Employment (NDE), Working for Yourself Programme (WFYP), The Nigerian Industrial Development Bank (NIDB), and the National Economic Reconstruction Fund (NERFUND). In 2001 the Nigeria Bankers' Committee established the Small and Medium Enterprises Equity Investment Scheme (SMEEIS) which compels banks to set aside annually 10 per cent of their profit before tax (PBT) for supporting the operations Small and Medium Enterprises in the country. According to the CBN, the services have resulted in an increased level of credit disbursement and

gains in agricultural production and other activities, the effects were short-lived, due to the unsustainable nature of the programmes. The government also intervened through supply-driven creation of financing institutions and instruments, but did not achieve much result due to the poor capitalization of such schemes and restrictive regulatory and supervisory procedures, among other factors. The Community Banks were designed to fill the gap, but their low capital base and isolated mode of operation have not enabled them to make meaningful contributions to microfinancing.

In the light of the above, this study will empirically investigate the impact of Microfinance Bank Loans and Advances on the Industrial Output of Nigeria within the period under review.

Review of Related Literature

Microfinance Banks are financial institutions that were established as an attempt to improve access to small deposit loans for poor households who were neglected by banks (CBN, 2005).

There are two main features that distinguish microfinance banks from other formal financial products are the smallness of loans advanced and the absence of asset-based collateral. These two features are what made it possible for microfinance banks to reach out to SMEs.

According to the International Labour Organization (2002), microcredit that is provided by micro financial institution is an efficient and effective way to create jobs. One way these jobs are created is through establishment and expansion of SMEs. However, in high income countries where financial and banking services are more accessible and organized to ease the recoup of

loans, microcredit is merely designed as a measure for social integration and correction of failures in labour and financial markets (Lammermann, 2010).

Nevertheless, the story is different for developing nations like Nigeria because of the level of financial market development. Some studies established that the effectiveness of microfinance bank operations have great impact on the speed and direction of the developmental process in developing nations. Among such studies was that of Nudamatiya, Giroh, & Sheh (2010) which analyzed the effect of microfinance on poverty reduction in Adamawa state Nigeria. This survey study was conducted using 88 beneficiaries of four microfinance institutions. The results revealed that majority of beneficiaries were females constituting about 70% and were in the active and group of between 26-45 years representing about 68%. Also, it was found that the respondents were mostly civil servants with the preferred sectors being commerce and crop farming constituting about 85%. The survey also revealed regression coefficient of 0.53, correlation coefficient of 0.71 and computed t-test value of 2.16 all showing positive impact that microfinance has on the income of beneficiaries. Maksudova (2010) study examined the contribution of microfinance to financial sector development and growth using a panel study of 103 countries for 1995-2008 period. Evidence from Granger causality revealed that microfinance bank Granger cause economic growth only in less developed countries through lagged values in places where formal financial intermediation is immature.

Olakokjo and Olanipekun (2011) analyzed the impact of microfinance loans and advances on sectoral growth in Nigeria using panel data regression methodology and Ordinary Least

Squares techniques and yearly data covering 1992-2008. The study observed that the current level of sectoral output in Manufacturing, Building, Construction, Mining and Quarrying sectors is generally positively influenced by loans and advances but a negative relationship was established for the Agricultural sector. For the Agricultural sector, the loan and advances elasticity of agricultural output was inelastic, negative and insignificant. This means that the higher the loans to this sector, the lower the output.

Okpara (2010) examined the impact of microfinance banks in alleviating poverty in Nigeria. The study identified the critical factors that cause poverty in Nigeria and the extent to which microfinance institutions have helped in the alleviation of poverty. The researcher used the method of regression analysis on quadratic equation model. The result of the analysis identified low profit, prices of commodities too high, hard economic times, lack of finance to start or expend their business and business not doing well as critical factors causing poverty. The analysis also revealed that the impact of microfinance on poverty can be categorized into two; the take-off stage where poverty is increasing though at decreasing rate as microfinance credit increases. The 2nd category started 2001 which involve persistence increase in microfinance credit, which reduces drastically the poverty index in Nigeria.

Methodological Issues

The econometric model of this study is given as follow:

$$\log IO = B_0 + B_1 \log MFB + B_2 \log REX_1 + B_3 \log HEXP + B_4 \log IMP + U$$

Where: B_0, B_1, B_2, B_3 and B_4 are parameters to be estimated.

IO= Industrial Output
MFB= Total Microfinance Banks' Loan and advances.
HEXP= Government Health Expenditure.
REX= Real Exchange Rate.
IMP= Import of goods and services.

Justification for the Model

Most studies we came across failed to recognize the impact of health on industrial output and other growth measuring variables. However, we all know that the productivity of labour depends partly on how healthy labour is. It is one thing to have the finance available and yet, another thing to be in good health working condition. Therefore, this study will incorporate Nigeria's annual total expenditure on health as a control variable to get the exert impact of microfinance bank loans and advances on industrial output of Nigeria within the period under study.

In line with existing economic theories, the expected signs for all the coefficients of the variables are; $B_1 > 0$, $B_2 < 0$, $B_3 > 0$ and $B_4 < 0$.

Data Issues

Industrial output is measured by the gross domestic output of the industrial sector of Nigeria over the period of study; Imports of goods and services is measured by the total annual amount of expenditure on importation of goods and services; Government Health Expenditure is measured using the Nigerian government's annual expenditure in the health sector; Real exchange rate is measured by Nigeria's annual average exchange rate after adjusting for inflation; Microfinance bank loan is measured by the annual amount of Microfinance bank loans and advances to the sector. Data for this study were all secondary in nature, sourced from Central Bank of Nigeria Statistical Bulletin of various issues.

Empirical Results

Results of this study were on the basis of these empirical estimations via STATA 11.0

4.1 Stationarity Test Result:

Table 1: ADF Result at First Difference

Variables	ADF Statistic	1%	5%	10%	Order of Integration
IO	-4.321	-3.750	-3.0000	-2.630	I(1)
MFB	-4.232	-3.750	-3.0000	-2.630	I(1)
REX	-3.861	-3.750	-3.0000	-2.630	I(1)
HEXP	-5.432	-3.750	-3.0000	-2.630	I(1)
IMP	-5.382	-3.750	-3.0000	-2.630	I(1)

The ADF test result presented in table 1 above indicates that all the variables were integrated of order one i.e I(1). In other words the result shows that IO, MFB, REX, HEXP and IMP are stationary at 5% level of significance.

Table 2: Regression Result

VARIABLE	COEFFICIENT	STANDARD ERROR	COMPUTED T-VALUE	CRITICAL T-VALUE	PROBABILITY VALUE	CONCLUSION
Constant	14.25712	1.794577	7.94	2.042	0.0000	-----
LogMFB	0.2461558	0.1109594	2.22	2.042	0.040	SS
logREX _{t-1}	-0.0771827	0.848281	-0.91	2.042	0.376	NSS
LogHEXP	0.5125592	0.159434	3.21	2.042	0.005	SS
LogIMP	-0.1005508	0.054981	-1.83	2.042	0.085	NSS

Note: SS- Statistically Significant
NSS- Not Statistically Significant
LogIO = 14.25712 + 0.2461558logMFB - 0.0771827logREX_{t-1} + 0.5125592logHEXP - 0.1005508logIMP
SE (1.794577) (0.1109594) (0.848281) (0.159434) (0.054981)
t* (7.94) (2.22) (-0.91) (3.21) (-1.83)
R²=0.9347; F*= 60.80; F_{0.025} = 2.96; DW= 1.8077

Discussion of Results

From the regression results above, microfinance bank loans and advances MFB and government expenditure on health HEXP had positive and significant impacts on industrial output IO within the period under review as 1% increase in microfinance bank loans and advances led to approximately 0.25% increase in industrial output and 1%

increase in government health expenditure led to 0.51% increase in industrial output of Nigeria within the period under review. On the contrary, real exchange rate REX and imports of goods and services IMP had no significant impacts on industrial output within the period under review. However, they had negative relationships with industrial output within the period under review. These results conform to a priori expectations.

Furthermore, the R^2 which yielded 93% shows the rate at which the independent variables influence the dependent variable; hence variations in the dependent variable can be justifiably attributed to 93% from the independent variables included in the model. Again, the result showed that f_{cal} 60.80 was greater than the f_{tab} 2.96. This implies that all the explanatory variables jointly explained the entire regression plane.

Policy Issues And Recommendations

Results from this study showed that microfinance bank loans and advances and government expenditure on health had significant impacts on industrial output in Nigeria within the period under review. This implies that policies made to make microfinance bank loans and advances accessible to the industrial sector will impact on Nigeria's industrial output positively. In addition, the good health condition of the Nigerian labour force will augment increased productivity in the economy.

On the strength of the findings of this study, we conclude that microfinance bank loans and advances are important macroeconomic variables to pursue sustainable economic

growth in the Nigerian economy. This study therefore, recommends that the Nigerian government needs to enforce policies that will reduce the cost of borrowing from microfinance banks. Government needs to provide enabling environment for microfinance banks to do business in Nigeria. For instance, government needs to address institutional and infrastructural challenges facing these microfinance banks in Nigeria.

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