Interest rate and its effect on economic growth: An issue for Nigeria industrial sectors

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Abstract

It is believed that the real sector is one of the major drivers of the Nigerian economy. The interest rate policies of the central bank are targeted at credit delivery to the sector in order to spur economic activities and growth. How these interest rate policies of the central bank eventually affect the growth of the economy has become an issue of serious concern. The aim of the study is to determine the effect the impact of interest rates on the Nigerian economy's industrial sector. The descriptive survey design is used to investigate the characteristics of the variables of interest in this study. The information was gathered from the monetary and real sector data of Nigeria's central bank. From 2010 quarter 3 through 2020 quarter 1, the data is available. Inter-bank lending rate (IBR), Open Buy Bank rate (OBB), Standing Lending Facility rate (SLF), Standing Deposit Facility (SDF), and 91 clays Treasury Bill Interest Rate (91 TBR) were utilized as independent variables, with GDP of the industrial sector as the dependent variable. The independent variables are interest rates, whereas the dependent variable is industrial sector economic growth, as measured by industrial sector GDP. When the p-values of the coefficients are compared to their various levels of significance, it becomes clear that the standing lending and deposit facilities have a significant influence on the industrial sector's economic growth. As a result, it is suggested that banks offer the best interest rates in order to maximize their profit as a profit-making institution while also assisting in the mobilization of credit for the productive sector of the economy. This should also be the basis for central bank monetary policy.

Keywords: interest rate, industrial sector, bank rate, standing deposit facility, treasury bills

Introduction

Small businesses and depositors will act in a different way than large corporations and financial institutions. Interest rates are usually regarded as expenses (Patterson and Lygnerud, 1999) [12]. It's the interest rate on a loan. The amount charged to borrowers over the duration of their credit utilization is also known as interest (Mutinda, 2014) [11]. The interest rate is the primary weapon used by monetary authorities to preserve price stability in an economy. The interest rate is believed to be the most efficient means of transmitting monetary policy (Adekunle, *et al*, 2018) [1]. It has been established that it has an influence on macroeconomic variables such as GDP growth, job creation, balance of payments equilibrium, and price stability in emerging nations. In previous decades, the influence of real interest rates on private investment spending and, as a result, economic development has been a topic of dispute. A lower real interest rate lowers the opportunity cost of capital, allowing more capital to be saved and invested. The real sector, especially the industrial sector, has been a major focus of the central bank's interest rate policy in Nigeria. The real estate sector is believed to be one of the major drivers of the Nigerian economy. The central bank's interest rate policies aim to increase credit availability to the private sector in order to stimulate economic activity and growth. The long-term impact of the central bank's interest rate policy on the economy has become a key cause of concern.

The interest rate is one of the most important elements in loan transmission, particularly to private sectors. Depositors are enticed to make little deposits and borrow big sums of money because of low interest rates, and vice versa. Interest rates come in a range of forms and sizes in each economy to represent various risks and expectations. Depositors shift their portfolios between cash, stocks, bonds, real estate, complex derivatives, antiques, and other assets, all of which have an impact on each other's markets. Interest rates are the costs of money and credit. It's the interest rate that money and credit providers charge. Borrowers pay interest on credit used for both investment and consumer spending, thus an increase in interest rates deters borrowers from borrowing from banks, while a drop in interest rates encourages them to do so. Interest rates have a big influence on the growth of any economy. It may be used by any monetary authority to manage inflation and encourage economic growth (Corb 2012) [4]. In general, higher interest rates help banks make more money, but they also stifle economic growth. One of the most serious issues with loan distribution to productive sectors has been banks' constant search for ways to increase profits by boosting interest rates. Because optimal interest rates are necessary to encourage economic growth while also allowing deposit money institutions to maximize profits, most central banks have taken on a substantial regulatory role in this area. Economic growth is defined as an increase in a country's real per capita income due to an increase in the amount of goods and services produced over time. Economic development includes raising

people's living standards and reducing income inequalities (Ufoeze, *et al*, 2018) [15].

Objective of the Study

The aim of study is to determine the effect of interest rates on economic growth of the industrial sector of the Nigerian neconomy. The specific objectives include:

1. To determine the effect of Inter-bank rate on the growth of industrial sector of the Nigerian economy.
2. To ascertain the effect of Open Buy Back Rates (OB B) on the growth of industrial sector of the economy.
3. To find out he relationship between Standing Lending Facility (SLF) and industrial sector growth.
4. To determine the effect of Standing Deposit Facility on the growth of industrial sector.
5. To determine the effect of 91days treasury bill rates on the growth of industrial sector of the Nigerian economy.

Literature Review

Interest Rate

Several of these research demonstrate a negative relationship between interest rates and production (Tobin, 1999) [14]. The Fisher Effect describes the relationship between nominal and real interest rates and inflation, as explained by interest theory. According to the Fisher Effect, an increase in the rate of money supply expansion generates inflation as well as an increase in the nominal interest rate to keep pace with inflation. The theory goes on to claim that at any given moment, the nominal interest rate is equal to the sum of the real interest rate and the expected rate of inflation, and that the nominal interest rate is made up of two parts: a real rate and an expected rate of inflation. Fisher claimed that interest rates and inflation have a one-to-one relationship in an ideal society. According to the idea, the real interest rate is unrelated to the rate of inflation and is purely controlled by economic factors. Fisher's rate of interest is important because it forms the basis for monetary policy, which is concerned with managing inflation expectations in order to keep interest rates stable.

Empirical Studies

Maigua and Mouni (2016) studied the influence of interest rate factors on commercial bank performance using a sample size of 26 out of 43 commercial banks in Kenya. Multiple regression analysis was used in the study to assess the outcome. Discount rates, inflation rates, and exchange rates all boosted commercial bank performance, while the reserve requirement ratio had the opposite effect. According to the study, greater discount rates, currency rates, and inflation rates are associated with better performance in Kenyan commercial banks, but higher reserve requirement ratios are associated with lower banking performance in Kenya. Kenya's monetary authority, according to the study, should create base reserve requirements that do not put excessive strain on banks' operations.

Kisseih (2017) [8] investigated the impacts of interest rate changes on the growth of Small and Medium Enterprises in Accra utilizing a balanced data set of six SMEs that were randomly selected and evaluated using ARDL, tables, and percentages. EBIT and interest rate showed a co-integration relationship, according to the study. Maiga (2017) [9] investigated the impact of interest rates on Nigerian economic development from 1990 to 2013 using ordinary least squares regression. (OLS). Interest rates have a modest impact on growth, according to the study's findings, but growth might be increased by lower interest rates, which would promote investment. The Nigerian government, according to the study, should establish interest rate policies that would assist the country's economy grow.

Drobyshevsky, Trunin, and Bozhechkova (2017) [5] examined theoretical concepts and global economic practices in high-interest-rate environments to justify that mechanisms such as low inflation expectations, the economy's attractiveness to foreign investors, the technological transfer effect, and the accumulative effect may not dampen economic growth if there are mechanisms in place. The study revealed that interest rate policy is only partially efficient following the global financial crisis.

One of the driving engines in the Nigerian economy is the industrial sector. It is one of the industries that the Central Bank of Nigeria has targeted with its interest rate policies in order to boost output and, as a result, the economy's growth. Understanding how interest rates affect the sector will assist policy creation and implementation in this regard. The literature's findings aren't always consistent. As a consequence, this study offers a current assessment of interest rates' influence on Nigeria's industrial sector.

Moyo and Le Roux (2018) [10] looked at how interest rate fluctuations influenced economic development in SADC countries through savings and investments from 1990 to 2015. The study looked at how interest rate changes affected savers, as well as the influence of savings on investments and whether investments aided economic development. The researchers utilized the Pooled Mean Group (PMG) estimation method and ARL hounds tests for each nation to test for cointegration. According to the conclusions of the study, cointegration is found in most countries for each of the three parameters, and interest rate adjustments have a positive impact on economic development via savings and investments. According to the study, market forces should decide actual interest rates.

Jelilove (2016) [7] used a linear regression model to examine the impact of interest rates on Nigeria's economic progress from 1990 to 2013. The outcomes of the study suggest that interest rates have a modest impact on growth, but that by decreasing interest rates, which would promote investment, growth may be enhanced. Nigerian authorities, according to the study's results, should establish interest rate policies that would assist the country's economy grow. As a result, necessary actions to promote quicker economic growth should be taken.

Harswari & Hamza (2017) [6] studied the impact of interest rates on Asian economic development using a sample of 20 out of 48 businesses. In this study, descriptive statistics and correlation analysis were employed. Interest rates have a negative significant impact on GDP, but inflation has a negative insignificant impact on Foreign Direct Investment, according to the data.

Simon-Oke & Jolaosho (2013) [13] investigated the impact of real interest rates on savings mobilization in Nigeria using the Vector-Auto Regression (VAR) and time series data from 1980 to 2008. According to the study's findings, real interest rates have a negative impact on savings mobilization in Nigeria. According to the findings, in order to promote saves for investment and economic growth, the government must reduce the gap between loan and savings rates, as well as boost per capita income.

Behera and Mishra (2017) [2] looked at whether there is an inflation ceiling and how it impacts the Indian economy's development. India's dynamic short- and long-term connection between inflation and economic growth will also be examined in this study. The results show that at 4%, there is a statistically significant structural break in the link between inflation and economic growth when using the spline regression approach to estimate the threshold level of inflation as well as the long-run and short-run correlations. The research uncovers two cointegration vectors when GDP and interest rate are employed as dependent variables, showing the existence of a long-run equilibrium connection between economic growth and inflation.

The long-term determinants of interest rates, as well as the relationship between interest rate volatility and economic growth rates, were examined by Bosworth (2014) [3]. In an increasingly globalized world, the study analyzed data from a number of major economists to illustrate how international interest rates impact the global financial system. The outcomes of the study show that global financial markets are extensively interconnected, and that calculating, evaluating, and predicting interest rates in a closed economy is futile. The study also revealed a distorted link between real interest rates and economic growth.

Research Method

The descriptive survey design is employed in the investigation of the characteristics of the variable of interest. The information was gathered from the Nigerian Central Bank's monetary and real sector data. The data is from the third quarter of 2010 through the first quarter of 2020. Inter-bank lending rate (IBR), Open Buy Bank rate (QBB), Standing Lending Facility rate (SLF), Stanching Deposit Facility (SDF), and 91 clays Treasury Bill Interest Rate (91 TBR) were utilized as independent variables, with GDP of the industrial sector as the independent variable. The independent variables are interest rates, whereas the dependent variable is industrial sector economic growth, as measured by industrial sector GDP. The following diagram depicts the link between interest rates and industrial development.

Industrial sector growth = f (monetary policy)

$ISGDP = B_0 + B_1IBT + B_2OBB + B_3SLF + B_491TBR + \varepsilon$

Where, β_0 is the interest of the regression model

IBR is Inter-bank lending rate: OBB is open buy bank rate; SLF is standing Lending Facility rate; SDF is Standing Deposit Facility and 91TBR is 91 days Treasury Bill Interest Rate.

β_1, β_2, β_3, β_4 and β_5 are rates of change of IBR, OBB, SLF, SDF and 91TBR on industrial sector GDP respectively.

ε is the error term associated with the model.

Result and Discussion of Findings

Table 1: Model results of interest rates and ISGDP

	Coeff.	STD ERR	T Stat	*P-Value*	VIF
Interest	3530141	27009.1	12.65787	2.45E-13	
IBR	-1337.2	7315.621	-0.18279	0.856237	2.265007
OBB	-2356.25	8536.774	-0.27601	0.784497	2.740431
SLF	-49180.3	22139.99	-2.22133	0.034295	1.467159
SDF	76195.61	24399.18	3.122876	0.004038	1.741368
91TBR	-22195.4	17347.99	-1.27942	0.210891	1.891931

The findinds

Table 1 shows the outcome of the interest rate and industrial sector growth model. Table 1 summarizes the findings of the coefficients (COEFF), standard error (STD ERR), T-statistic (T STAT), P-value, and variance inflation factor (VIF). When the p-values of the coefficients are compared to their respective levels of significance, it is clear that standing lending and standing deposit facilities have a significant influence on the industrial sector's economic growth. The inter-bank lending rate, the interest rate on 91-day Treasury bills, and the open buy hack rate have no major influence on the growth of the Nigerian economy's industrial sector. The importance of the standing lending and deposit facilities implies that credits to the industrial sector are being transferred through the medium. The credit distribution to Nigeria's industrial sector is determined by the standing lending facility and the standing deposit facility.

Conclusion and Recommendation

Because the financial sector has a wide range of interest rates, it's critical to determine which ones aid successful credit transfer to the productive sector, which is the motor of any economy. Depositors are enticed to make little deposits and borrow big sums of money because of low interest rates, and vice versa. Interest rates come in a range of forms and sizes in each economy to represent various risks and expectations. Depositors shift their portfolios between cash, stocks, bonds, real estate, complex derivatives, antiques, and other assets, all of which have an impact on each other's markets. Interest rates are the costs of money and credit. It's the interest rate that money and credit providers charge. Borrowers pay interest on credit used for both investment and consumer spending, thus an increase in interest rates deters borrowers from borrowing from banks, while a drop in interest rates encourages them to do so. According to the findings of the study, standing lending and standing deposit facilities have a significant impact on the Nigerian industrial sector. The interbank rate and the 91-day treasury bill rate have little effect on the industrial sector of the economy. As a result, banks should offer the lowest interest rates in order to maximize their profit as a profit-making organization while simultaneously aiding in the mobilization of credit for the productive sector of the economy. Monetary

policy of central banks should also be based on this regard.

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