

IMPACT OF COMMERCIAL BANK LENDING RATES ON ECONOMIC GROWTH IN NIGERIA (1986 – 2020)

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Abstract

This study investigated the effect of commercial bank lending rates on economic growth in Nigeria between 1989 and 2020. It specifically examined the connections between bank lending rate and Nigerian economic growth using data from various issues of the Statistical Bulletin of the Central Bank of Nigeria. Multiple regression technique was used to determine this synergy. The findings indicate that any one percent increase in credit to private sector and commercial banking lending would significantly increase economic growth in Nigeria by 23 and 33 percent, respectively. These finding suggest that viable credit to private sector with relevant financial instruments should be encouraged to develop and provide larger credit facilities in order to improve economic growth in Nigeria.

Keywords: Bank Lending, Interest rate, Private sector, Economic Growth

Introduction

The contributions of private sector to the growth and development of any economy cannot be over-emphasized. This largely dependent on the behavior of the macroeconomic variables, especially interest rates. The level of production and consumption in an economy is affected by factors including interest rates and exchange rates, but inflation and exchange rates are only a few of the many monetary variables that affect the level of production and consumption.

As Ackley (1961) noted, the monetary policy decisions are executed through the interest rate. Smith (1970) also discovered that the monetary aggregates lose most of their explanatory power when interest rates are disregarded, implying that interest rates are indispensable to the advancement of economic growth. This implies that, in countries where enterprises and financial institutions lack experience, rapid liberalization may prove counterproductive and result in unsound financial sector.

Theoretically, there is a general economic reason that low lending rates encourage investment, increase income, increase consumption not only in the short-run but also in the long term. It will then drive the overall economy creating growth. Khan et al (2020), Todaro & Smith (2012) Ufoeze et al., (2018) notes that lending rate affects the core operation of an economy through consumption and production, exchange rate, inflation, policy rate and others. However, the findings of Nicholas (2010), Obamuyi&Olorunfemi (2011), Noola (2012), Shaukat et al (2019), Nampewo, (2021) indicated that there exists a positive relationship between bank lending rates and economic growth. Okore, Onwumere& Ibe (2012) show no correlation between interest and lending rates and growth, however, Obute, Asor & Itodo (2012), Awad et al (2019) report that there is no connection. These researchers have also investigated the relationships between interest rates, investment in the private sector, and the use of investment funds, as well as the interest rates that are

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applied to companies' overall performances. Thus, this study will estimate the impact of commercial bank interest rates on economic growth of Nigeria via private sector between 1986 and 2020.

Intuitively, the growth of financial institutions is essential to having a significant impact on the role of bank lending rates in a particular economy. This is because bank facilitates financial transactions by collecting deposits from surpluses in the economy and loaning them out to deficits (Kalu, 2009). Investing during the period of industrial revolution created a demand for large capital outlays for projects because projects now occur more rapidly as a result of a high level of commercial activities, production activities, and technological changes. The captains of industry who in the late 19th century suddenly found themselves in greater financial need and thus turned to the banks for assistance were the ones who missed the turning point in the overall market. However, it has been noted by researchers (Kurihara, 2006; Ologunde, Elumilade & Saolu, 2006) that a market investment strategy are critical factors to the market capitalization and economic growth.

Achieving this objective will require significant financial sector resources to be deployed in order to finance private sector growth and expansion. In addition, banks need to serve as effective intermediaries for mobilizing and channeling deposits to the productive sectors of the economy, they must be useful when it comes to investing those deposits. Keeping bank lending rates low seem to be a basic requisite for promoting private domestic investment, which in turn is one way to fuel the growth of the overall economy in developing country such as Nigeria.

LITERATURE REVIEW

Conceptual Review

Economic growth can be explained as an increase in economic production capacity which is manifested as an increase in national income (Daniel, 2018; Lubis, 2014). Increasing the volume of production in real terms, both goods and services is often not the same as the increase in production potential, so that means economic growth is considered slower than its potential (Sukirno, 1994), such inequality can occur due to an increase in consumer purchasing power over the production potential possessed by an economy and is not in line with the economy's ability to produce goods and services.

Interest is defined as rewards given for using borrowed money (Martina and Prastiwi, 2014). Interest rate is defined as the amount of interest due per period expressed as a percentage of the amount lent, deposited, or borrowed. The interest rate given is influenced by the amount of money borrowed (Martina and Prastiwi, 2014). Fahmi and Hadi (2010) add that the interest rate is also determined by the length of time of the loan and the changes in the value of inflation rate. Firdaus and Ariyanti (2009) stated that the interest rate is also based on the level of profit expected by the bank to the credit provided.

The relationship between the lending rate at the banks and the overall economy has caused an abundance of inconsistencies in economic theory. Tridico (2007) describes the relationship between lower bank lending rates and the expansion of the economy as complicated, a connection that requires cooperation of several socio-economic and institutional factors.

Theoretical Literature

Various theories advanced in previous studies are discussed here. Theory of pricing, Fisher's effect, loanable funds theory, Keynes's liquidity theory

of interest rates, and the classical theory of interest rates all made important contributions to the understanding of interest rate.

Theory of Pricing

The theory of price is a theory which states that the price for goods and services is determined by economic forces such as supply and demand. According to this theory, the relationship between supply and demand influences price as to whether the prices of goods and services will rise or decline. Gordon (2022), Clarke (1982) describes it as the numerical monetary value that is attached to a good, a service or an asset. If there is too much supply of money in the market, the result is a downward pressure on the prices of commodities whereas excess demand for money in the market results into an upward pressure on the prices of commodities.

Fishers Theory

This theory was named after the American economist Fisher (1930), and it is the most well-known theory; it forms the basis of the standard recommendation on the real interest rate. He argued that financial markets ought to establish the nominal interest rates on deposits that are positive in real terms. This is because savers must be induced to hold financial rather than real assets which on average grow on nominal terms at the rate of inflation. Thus, the nominal interest rate must equal the expected inflation rate plus a small underlying real rate.

Loanable Funds Theory of Interest

This theory was advanced in the 1930s jointly by two economists: Dennis Robertson and Bertil Ohlin, a British and a Swedish economist respectively. Loanable funds refer to the sum of money that is offered and available for lending to consumers and investors during a given period. In this case the interest rate model is

determined by the interaction between potential borrowers and savers. According to this theory, economic agents are out to make the best use of the resources at their disposal over the lifespan of such resources. For an individual investor to increase future real income, she might consider borrowing funds today to take advantage of the currently available investment opportunities in the economy. This only works if the investment's rate of return is surpassing the cost of borrowing. It is natural for borrowers to be unwilling to pay higher real rates of interest than the rate of return available to capital.

Liquidity Preference Theory of Interest Rate

Keynes (1936) explained the genesis of the rate of interest by the supply and demand for money. He argued that interest rate is not a reward for saving as such because if a person hoards his savings in cash, keeping it under his pillow for example, he will receive no interest, although he has nevertheless refrained from consuming all his current income. He therefore asserted that interest rate is a reward for parting with liquidity. This theory is based on the premise that investors will always prefer short-term securities to long-term securities.

Classical Theory of Interest Rate

This is one of the oldest theories which was developed during the nineteenth and twentieth century by several British economists and elaborated by Irving Fisher (1930). It is concerned by the determinants of pure or risk-free rate and argues that the interest rate is determined by two forces namely the supply of savings determined from the household, and demand for investment and capital mainly from the business sector. Classical theorists consider interest rate payment as a reward for postponing current consumption in favor of future greater consumption. High interest rates make savings attractive and

worthwhile relative to consumption spending encouraging more individuals to substitute current savings for some quantity of current consumption. This is referred to as substitution effect and it calls for a positive relationship between interest rate and the volume of savings.

Empirical Review

Emecheta & Ibe (2014) investigated the impact of bank credit on economic growth in Nigeria using the reduced form of the vector autoregressive (VAR) technique and time series data from 1960 to 2011. Their results show that there is a statistically significant positive relationship between bank credit to the private sector, broad money, and economic growth. Similarly, Mamman & Hashim (2014) examined the impact of bank lending on economic growth in Nigeria from 1987 to 2012. Through the use of a multiple regression model, their finding revealed that bank lending is responsible for approximately 83 percent of the variation in economic growth in Nigeria over the period under consideration.

Nwakanma, Nnamdi & Omojefe (2014) examined the nature of the long-run relationship that exists between bank credits to the private sector of Nigeria's economy and the nation's economic growth, as well as the directions of the prevailing causality between them. The results of applying the Autoregressive Distributed Lag Bound (ARDL) and Granger Causality techniques reveal a significant long-run relationship between the study variables, but no evidence of significant causality in either direction in either direction. Again, Marshal, Igbaniibo & Onyekachi (2015) used time series Nigerian data for the period 1980-2013 to investigate the impact of bank domestic credits on the economic growth of Nigeria. In the short run, the relative statistics of the estimated model show that credit to the private sector (CPS) and credit to the government sector (CGS) are positively

and significantly correlated with GDP. The findings of the study revealed that the long-term relationship between bank domestic credit indicators and gross domestic product in Nigeria is poor.

Akujuobi and Nwezeaku (2015) examined the impact of bank lending activities on economic development in Nigeria over the period 1980-2013, focusing on the period 1980-2013. The results of the application of the test for stationarity with the Ordinary Least Square (OLS) and Co-integration procedures revealed a statistically significant relationship between bank lending activities and economic development in Nigeria. Credit to the general commerce and manufacturing sectors was statistically significant, and it met the expectations that had been set forth in advance. From the study of Olowofeso, Adeleke & Udoji (2015) that estimated the impact of private sector credit on economic growth in Nigeria. This study was determined using the co-integration test developed by Gregory and Hansen (1996). The method was applied to quarterly data spanning the period 2000:Q1 to 2014:Q4, with the model coefficients estimated using the fully modified ordinary least squares procedure. A co-integrating relationship between output and selected determinants was discovered, though there was a structural break in the relationship during the first quarter of 2012. Among other things, the results of the error correction model confirmed that private sector credit had a positive and statistically significant effect on output, and that an increase in the prime lending rate was a hindrance to the expansion.

Over the period 1986 to 2014, Makinde (2016) investigated the implications of commercial bank loans on economic growth in Nigeria. With the help of Ordinary Least Square (OLS) multiple regression techniques, the researchers discovered that only the agricultural

sector has been receiving a significant amount of bank credit, which has had a positive impact on the country's Gross Domestic Product (GDP), whereas other sectors such as mining and quarrying, manufacturing, and the building and construction sectors have not received as much attention in terms of bank credit to grow their businesses.

Karahan and Olak (2020) used a nonlinear ARDL approach to examine quarterly time series data from 2003 to 2017 and discovered a nonlinear relationship between inflation and economic growth in the long run. Adobor (2022) also used the nonlinear ARDL bound testing approach which was applied to a yearly time series data covering the period of 1970 to 2019 obtained from World Bank (2019) and Bank of Ghana (2019), the results confirmed that banks' lending rate affect economic growth asymmetrically.

From the above reviews, it then suggests that the intermediation function of commercial banks, which involves the mobilization and distribution of resources, has the potential to reduce the income disparity between the rich and the poor, improve the standard of living/quality of life, and lower the rate of unemployment, all of which have the potential to spur economic growth and development. The various reforms implemented in the Nigerian banking system, has helped lending to the private sector to grow, despite the country's current macroeconomic instabilities.

Research Methodology

The scope of this study was covered by a time frame of thirty (35) years between 1986 and 2020, with data from 2020 statistical bulletin of the Central Bank of Nigeria (CBN) and International Financial Statistics and data files of the International Monetary Fund (I.M.F).

The Model:

A modified model of Timsina (2014) for a study in Nepal was adopted.

The functional form of Timsina (2014) is expressed as:

$$RGDP = f(CPS, BLR, INF)$$

$$\dots\dots\dots (1)$$

Where: RGDP = real gross domestic product;

CPS = credit to private sector;

BLR = banks' lending rate and

INF = inflation rate in Nigeria.

Econometrically transforming the models by introducing log to ensure equal numerical base of dependent and independent variable for easy interpretation of coefficient value, the following models were developed:

$$RGDP_t = a_0 + a_1 CPS_t + a_2 LOGBLR_t + a_3 LOGINF_t + U_t \dots\dots (2)$$

Where a_0 is constant coefficient, U is a random error term and t is the time trend; normally included in standard time-series specifications to account for the omitted variables in the model.

Data Analysis and Interpretation

Descriptive Statistics

Table 1 provides the summary statistics of the main variables. The result shows that the average level of CPS, BLR, INF and RGDP are #5,841,437, 24.39.12.72 and #36,247,749 between 1986 and 2020. The standard deviation indicates the dispersion or points away from the mean and median, the bank maximum lending rate (BLR) shows a relatively lesser dispersion when compared to the other variables – this may be indicative of uniformity in lending rates in the 35 year period under review.

Table1. Descriptive Statistics of the Variables

Variable	Mean	Median	Std.Dev.
CPS	5841437	1755195	6597824
BLR	24.39529	23.0975	4.359816
INF	19.10827	12.71577	17.33543
RGDP	40731474	36247749	20096025

Source: Authors' Estimations (2022)

Correlation analysis is employed to measure the strength or degree of responsiveness of the variables to trust and among the interrelationships. This is a statistical process to not just identify patterns but specifically, see how the variable interplays in terms of degree of relationships. The effect size or magnitude of this value ranges from a scale of +1 and -1 for measuring the strength of the relationship, with values closer to 1 and farther from 1, pointing to a stronger relationship classified from high to moderate to low. Also, the signs of the relationships speak to the

direction with positive (+) as and negative (-1) as indicated by the range of +1 and -1 on either side of the numbers line. Prior before analysis, a theoretical maximum and minimum of +1 and -1 is set to mark strength and direction from the bivariate relationship. RGDP has a positive relationship with CPS and BLR.

Table 2 show the correlation matrix of the variables. The matrix between RGDP and CPS is positive. The correlation between RGDP and BLR is also positive, and the covariance between RGDP and INF is negative.

Table2. Correlation Matrix

	CPS	BLR	INF	RGDP
CPS	1.000000	0.038752	-0.46074	0.968564
BLR	0.038752	1.000000	0.151910	0.147313
INF	-0.46074	0.151910	1.000000	-0.4351
RGDP	0.968564	0.147313	-0.4351	1.000000

Source: Authors' Estimations (2022)

Unit Root Test

The table below shows Augmented Dickey Fuller (ADF) test of unit root conducted on all the variables to test for stationarity of the variables. The ADF calculated values are used to compare the McKinnon 1% and 5%

critical values. For a variable to be termed stationary, the ADF computed value must be negative and less than the Mackinnon critical value. In other words, the absolute value of the calculated ADF of a variable must be greater than its McKinnon critical value.

Table3.Augmented Dickey-Fuller Unit Root Test

Variables	ADF Calculated Value at Level	ADF Calculated Value At 1 st Difference	ADF Calculated Value At 2 nd Difference	McKinnon 5%Critical Value	Order of Integration
Log(RGDP)	-0.371764	-2.754683	-5.703383	-8.040982	I(2)
Log(CPS)	-2.256236	-4.893082		-2.963972	I(1)
Log(BLR)	-3.203767			-2.960411	I(0)
Log(INF)	-2.673704	-6.328283		-2.963972	I(1)

Source: Computation from Eviews10.0)

Table 3 presented the Augmented Dickey Fuller (ADF) test of stationarity. From the Table 3, we compare the calculated ADF value with the McKinnon critical value at 1% and 5%. Hence, the result indicates that all the variables except log (BLR) were not stationary at level. Other variables became stationary at first difference and 1% and 5% critical values.

Regression Estimate to Establish the Presence of Link

One of the major goals in regression analysis is the estimation of coefficients. This implies the relationship between dependent and independent variables. The sign of coefficient of each independent variable indicates its relationship with dependent variable, while the magnitude of the coefficient implies the degree of responsiveness of dependent variables to independent variable.

Table4. Impact evaluation of bank lending on economic growth in Nigeria

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	13.06191	0.431593	30.26441	0.0000
LOG(CPS)	0.231832	0.011561	20.05277	0.0000
LOG(BLR)	0.332596	0.128044	2.597518	0.0148
LOG(INF)	-0.00749	0.036652	-0.20446	0.8395

R-squared=0.95026

Adjusted R-squared = 0.94493 F-statistic = 178.3079

Prob(F-statistic)=0.000

From Table 4, the CPS is positively signed and statistically significant ($a_1 = 0.23$, $\rho = 0.000 < 0.05$). This conforms to theoretical expectation. The implication of this result is that 1% rise in credit to private sector, yields 0.23% increase in economic growth. Furthermore, BLR is positively signed and statistically significant ($a_2 = 0.332$, $\rho = 0.000 < 0.05$). This conforms to theoretical expectation. The implication of this result is that, 1% rise in lending rate, yields 0.33% increase in economic growth. INF is negatively signed and not statistically significant ($a_3 = -0.007$, $\rho = 0.8395 > 0.05$). This conforms to theoretical expectation. The implication of this result is that, 1% rise in inflation rate, results to a 0.007% decrease in economic growth.

In term of goodness of fit of the model, the coefficient of determinations R^2 in the model is 95%, while the adjusted R^2 is 94%. The difference between the two is that the former does not account for degrees of freedom while the latter accounts for the degree of freedom and so it becomes a better measure of model fit. The adjusted R^2 indicates that about 94 percent of the total variations in Real Gross Domestic Product are explained by the variations included in dependent variables. This shows that our model explains large proportion of variations in growth in Nigeria. The model also represents a good measure of fit on the basis of the adjusted R^2 which accounts for 94 percent taking into adjustment the degrees of freedom.

The F-statistic shows the overall significance of the model. The F-statistic is significant at 5% level. The probability of its value (0.0000) is less than the 0.05 critical levels. Thus, the F-statistics of 178.3079 and its probability value of 0.0000, show that the results adequately explain the model. We, therefore, reject the null hypothesis that

the model is not significant in explaining the variations in the RGDP.

Conclusion and Recommendation

The research study examines the relationship between commercial bank lending rates and economic growth in Nigeria, as well as the effects of related variables such as interest rate and inflation, which help to explain the growth path from 1989 to 2020. Multiple regression models, often known as the ordinary least squares (OLS) technique, were used to determine the synergy or effect.

Given a performance rate of change of 0.23 on Real GDP based on adjustments in credit to the private sector, the empirical findings of this study demonstrates that banks in Nigeria have a low level of activities and a limited capacity to support the Nigerian economy (CPS). Another conclusion that can be drawn from the findings of this study is banks and non-bank financial institutions (NBFIs) are important in stimulating economic growth in Nigeria through interest rate vehicle. After adjusting for time, bank lending with interest rate and inflation rate contributed about 94.49% variation in the growth of Nigerian economy during the period under review.

In term of the study's recommendations, there is need to develop a framework for upping the credit standards to meet global best practices with attendant effects on credit supply, interest rates, volume of loan request and the structured repayment of the loans and credit, such that it does not have a boomerang effect on growth in economic activities.

The following list of recommendation will serve as policy suggestions;

- Policies should be pro-poor, which means they should target enterprises with little resources and financial capabilities, with the goal of

increasing their access to finance and delivering it at a reasonable rate;

- Effective lending and finance education for entrepreneurs, primarily small business owners, on the criteria to meet loan demand and enhance access to credit and finance;
- Firm collaboration and partnership between the public sector (government) and the private sector (including non-governmental organization as well), and
- Ensure that there are guidelines on the list of financial institutions where credits can be accessed as well as the general and firm-specific requirements.

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