Effect of Commercial Banks' Credit to Small and Medium Enterprises on Economic Development of Nigeria

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Abstract

This study investigated the effect of commercial banks' credit to small and medium enterprises (SMEs) on economic development in Nigeria (1990 to 2019). Data was collected from the Central Bank of Nigeria Statistical Bulletin 2019. Economic development indicators include: unemployment rate (UNR), Human Development Index (HDI) and Gross Domestic Product per capita (GDPPc), while the explanatory variables include: Commercial Banks' Credit to the Agricultural Sector of SMEs (CBA), Commercial Banks' Credit to the Manufacturing Sector of SMEs (CBM), Commercial Banks' Credit to the Transport Sector of SMEs (BCT) and Interest Rate to SMEs (INT). The method adopted for evaluation of the model is the multiple linear regression method of ordinary least square (OLS). The findings of this study revealed that there was a significant ($p<0.05$) relationship between BCA, BCM, BCT, INT and UNR in Nigeria, as they jointly explained changes in the UNR in Nigeria at 58.3% within the period under study. The results also revealed a significant ($p<0.05$) relationship between BCA, BCM, BCT, INT and HDI in Nigeria, as they jointly explained changes in the HDI in Nigeria at 97.3%. Again, there was a significant ($p<0.05$) relationship between BCA, BCM, BCT, INT and GDPPc in Nigeria, as they collectively accounted for 99.3% of the variations in GDPPc. The study concluded that, there was a significant influence of commercial banks' credit to SMEs on economic development in Nigeria. It was therefore recommended that lending to SMEs should be supported by monitoring and enforcement to ensure viable investment. This will help curtail the unemployment rate in the country and thereby improve economic development.

Keywords: *Commercial Banks' Credit, Small and Medium Enterprise, Economic Development, Unemployment Rate, Human Development Index, Gross Domestic Product Per Capita.*

1. INTRODUCTION

1.1 Background Information

Small and Medium Enterprises (SMEs) are celebrated in almost every country and state. SMEs have been aptly referred to as the engine of growth and catalysts for socio-economic transformation of any country due to the significant role they play in the growth and development of various economies. Small and medium-sized businesses (SMEs) are an excellent vehicle for achieving the national economic goal of job creation (Duru & Lawal, 2012; Iloh, 2014; Ayuba & Zubairu 2015).

The Federal Government did not only emphasize the need to maximize value-added to the GDP in the 1970s, but also launched the creation of heavy industries in the intermediate and capital goods sectors, particularly within the context of the 1970– 1974 National Plan. While the first stage of the ISI strategy (replacing imported non-durable consumer goods and their inputs with domestic manufacturing) was a success, the second stage (replacing imported intermediate inputs and producer and consumer durables) was a failure (Nwosu, Osuagwu, Abaenewe, Ndugbu, & Ayegba, 2016).

The speed of economic development has slowed in many countries today, particularly in developing and developed countries, although Africa has had continuous economic growth for the past 15 years, with annual growth rates frequently exceeding 5%. (Olaoye, Adedeji, & Ayeni-Agbaje, 2018). The experiences of established economies in relation to the roles played by SMEs reinforces the relevance of SMEs, placing an overwhelming emphasis on emerging countries. However, the overall economic climate is deteriorating, particularly as the expansion of oil and resource exporting countries slows. This expansion is projected to continue, but at a reduced rate. In this shifting climate, it's critical to examine growth patterns and identify those that can be sustained (Onakoya, Fasanya, & Abdulrahman, 2013).

SME (Small and Medium Scale Enterprise) has shown to be a key tool for industrialized countries to achieve socioeconomic growth. In recent years, the small-business sector has been seen as the modern-day economy's backbone (Olaoye et al., 2018). Nigeria has the 30th largest nominal GDP and the 23rd largest purchasing power parity economy in the world. It is a developing middle-income country with expanding manufacturing, financial, service, communications, technology, and entertainment industries. In order to encourage economic growth, they've also put policies in place, as well as Enterprise and Economic Development Agencies, to stimulate, promote, and coordinate investment activity in various states, such as Ekiti. One of these development techniques is industrial growth and expansion of Small and Medium Scale Enterprises (SMEs). Governments in the past and present have emphasized the contributions of the domestic developed economy through encouraging SMEs (Ikechi, & Nwadiubu, 2021).

One of the issues that confront SMEs in Nigeria is that the government does not give them a chance or consider them when crafting policies that favor huge corporations (Afolabi, 2013). As a result, funding is the most significant stumbling block to SMEs' expansion, limiting their ability to contribute to Nigeria's economic progress. Also, SMEs in the country have continued to rely primarily on domestically generated funds, limiting their operational reach. Several empirical studies such as Afolabi (2013); Bassey, Asinya & Amba (2014); Bello & Mohammed (2015); Ilegbinosa & Jumbo (2015); Muhammad, Olusegun, & Sonny (2018); Ubesie, Onuaguluchi & Mbah (2017) have been undertaken in the past in order to determine the impact of small and medium-sized businesses on the Nigerian economy. Ilegbinosa and

Jumbo (2015) studied the years 1970 to 2012, while Ubesie et al. (2017) studied the years 1986 to 2015. However, the current study covered a twenty-nine-year period, from 1990 to 2019, in which the Unemployment Rate (UNR), Human Development Index (HDI), and Gross Domestic Product per Capita (GDPPc) were used as dependent variables to proxy Nigeria's economic development, while Commercial Bank credit to the agricultural sector of SMEs (BCA), Commercial Bank credit to the manufacturing sector of SMEs (BCA), and Commercial Bank credit to the manufacturing sector of SMEs (BCA) were used as independent variables. This study captures these facts and determines that further investigation is required.

1.2 Problem Statement

Nigeria's small and medium enterprises (SMEs) have not performed admirably, and so may not have played the expected critical and lively part in the country's economic growth and development. The government, citizens, operators, practitioners, and organized private sector groups have all expressed alarm about the situation. Year after year, governments at the federal, state, and even municipal levels have expressed interest in and recognition of the critical role of the SME sub-sector of the economy through budgetary allocations, policies, and statements, and have enacted measures to energize it. Fiscal incentives, grants, support and aid from bilateral and international agencies, as well as specialized institutions, have all been used to help the SME sector thrive. Just as promoting the welfare of SMEs has been a major concern for all, the fact that the key sub-sector has fallen short of expectations has been a major source of concern for all.

However, when compared to what other emerging and industrialized countries have accomplished with their SMEs, the issue is more concerning and concerning. It has been demonstrated that there is a strong link between the degree of poverty, hunger, unemployment, and economic well-being (quality of living) of a country's inhabitants and the vibrancy of the country's SMEs. Some of the Millennium Declaration Goals, such as halving the proportion of people living in extreme poverty, hunger, and without access to safe water by 2015, halving maternal and infant mortality by three-quarters and two-thirds, and enrolling all children in primary school by 2015, may be a mirage unless our SMEs' fortunes turn around sooner rather than later. This is the environment in which this study is framed, with the goal of determining the extent to which commercial banks' credit to small and medium-sized businesses has contributed to Nigeria's economic development.

1.3 Objectives of Study

The aim of this study is to assess the effect of commercial banks' credit to small and medium enterprises on economic development of Nigeria. In so doing, the researcher intends giving an in-depth information and analysis on the operations and activities of commercial banks' credit to small and medium enterprises in Nigeria.

The specific objectives are:

i. To ascertain the extent to which commercial banks' credit to the sectors of SMEs has influenced unemployment rate in Nigeria.

ii. To ascertain the extent to which commercial banks' credit to the sectors of SMEs has impacted on human development index in Nigeria.

iii. To ascertain the extent to which commercial banks' credit to the sectors of SMEs has impacted on the gross domestic product per capita in Nigeria.

iv. To make recommendations based on the findings.

1.4 Research Hypotheses

The hypotheses tested here include the following:

Ho_1; There is no significant relationship between commercial banks' credit to the sectors of SMEs and unemployment rate in Nigeria.

Ho_2; There is no significant relationship between commercial banks' credit to the sectors of SMEs and human development index in Nigeria.

Ho_3; There is no significant relationship between commercial banks' credit to the sectors of SMEs and the gross domestic product per capita in Nigeria.

2. LITERATURE REVIEW

2.1 Conceptual Framework

2.1.1 Concept of Small and Medium Scale Enterprises

Small and medium enterprises (SMEs) should be used more frequently to speed economic growth, according to development strategists, particularly in developing countries. The majority of African countries are agrarian societies, with the bulk of the population engaged in agricultural activities such as farming, livestock rearing, agroforestry, and fishing (Nwosu et al., 2016). With limited resources, it appears evident that the industrialization process should be centered on the growth of SMEs to combine agricultural production with manufacturing activity. This necessitates specific incentives to aid in the development of the SMEs sub-sector, such as easy credit access, infrastructure provision, industrial extension services, and the development of production capacity based on locally developed or adapted technology, as well as locally designed equipment and spares (Imoughele & Ismaila, 2014).

The need to encourage a thriving industrial sector has remained a top priority for most governments around the world, particularly in emerging countries like Nigeria. The reasons for this are centered on the likelihood that a developed industrial sector will expand manufacturing production, generate more jobs, and improve the sector's efficiency. Similarly, modern industrial processes are characterized by high technological advancements, the development of management and entrepreneurial abilities, and improvements in technical skills, all of which are expected to boost productivity and improve people's living conditions (Mekwunye, 2018). As a result, productivity will rise, and a sustainable level of economic development will be reached, with the promise of expanded economic diversification and exports. In the global market, the economy will have the potential to compete (Olowookere & Hassan, 2021).

According to Obioma, Anyanwu, and Kalu (2015), successive Nigerian governments have continued to articulate policy measures and programs to achieve industrial growth and development, including direct participation, alone or jointly with the private sector, interest groups, assistance from external agencies, and the provision of industrial incentives, in recognition of the sector's potential role (Obioma, Anyanwu, and Kalu, 2015). However, the poor performance of the industrial sector, particularly when the focus was on medium and large-scale enterprises as part of the Nigerian government's import substitution strategy, led to a renewed emphasis or focus on small and medium enterprises (SMEs) as the industrial sector's driving force. Both developing and developed countries rely heavily on small and medium businesses (Akingunola, Olowofela, & Yunusa, 2018).

Efforts to encourage SMEs' growth in most developed countries date back over a century and have aided in the creation of an enabling environment for their operations. According to Ayanda & Adeyemi (2011), the experience of developed countries suggests that the key environmental support for SMEs in creating a favorable operational environment through policy framework should include: Sophisticated or developed capital markets that offer the full range of financial products, ranging from seed capital to secured debt; Sophisticated or developed capital markets that offer the full range of financial products, ranging from seed capital to secured debt; Sophisticated or developed capital markets that offer the full range of financial Public policies that encourage private financial institutions to lend directly to SMEs

are a good example of this. A comprehensive governmental delivery system for company development services, reinforced by innovative commercial and non-profit initiatives, is being developed. Data on the SMEs sub-sector should be created, analyzed, and disseminated through public policy. Legal and regulatory safeguards that encourage innovation, decrease corporate risk, and make it easier to enter and exit the market. Tax breaks for the creation and expansion of small businesses (Babajide, 2012).

2.1.2 Funding options for SME's

Small and medium enterprises have two options for financing. Internal and external sources of money are used by most small enterprises (Abbasi, Wang & Abbasi, 2018), with internal sources being the most common. According to an OECD assessment on the business environment in transitional economies performed in 2015, the share of internal funding in advanced reforming countries is much lower, as follows: Estonia has 33%, Poland has 34%, and Lithuania has 37%. Internal finance accounts for 54 percent of overall financing in SMEs less than two years old in the United States. Internal sources of funding for most organizations are retained earnings for the period, including depreciation provisions, which is basically a book transfer. Bank loans and other forms of institutional credit are examples of external sources of funding. According to the OECD (2015), India's external financing sources include informal channels, credit unions, and commercial banks, all of which play an equal role in the provision of external money. These sources are not dissimilar to the array of external financing options available to most Nigerian enterprises. Public equity and debt supplied through the Nigerian Stock Exchange (NSE) must also be included as external sources of finance.

In Nigeria, SMEs have had an expanding financial demand that has attracted government attention during the last three decades. As a result, the government has put in place steps to make financing more accessible to the SMEs sector. In order to help SMEs in Nigeria, the government attempted to collaborate with bilateral and international agencies as well as non-governmental organizations (NGOs). In 1984, for example, the Federal Government of Nigeria negotiated and received a US$42 million loan from the World Bank under the SME I lending plan. The government acquired a World Bank SME II credit program of US$270 million for the development of SMEs after the approval of the Structural Adjustment Program (SAP) in mid-1986 (World Bank, 2021).

Some elements must be emphasized when attempting to conceptualize small and medium companies (SMEs) in Nigeria. First, there is no universally agreed definition of small or medium firms because determining whether a business is large, medium, or tiny is a subjective and qualitative decision. Second, small firms are typically very responsive to their surroundings, and our environment is constantly changing. As a result, changes in the environment have an impact on what constitutes a small firm at any given time. Third, the definition seeks to provide some boundaries (lower and upper) that will aid in the achievement of the stated goal. Limits can be set in terms of capitalization, sales volume, personnel count, and so on. A clear definition may be important in a specific national context, but attempting a worldwide definition may not be feasible. A few definitions of SMEs are presented in an attempt to highlight the differences in definitions among countries (Ayanda & Adeyemi, 2011; Etuk et al., 2014; Bosma et al., 2018).

2.2 Theoretical Framework

This study is anchored on the pecking order and money led growth theories, which are briefly discussed as follows:

2.2.1 The pecking order theory

Myers and Majluf (1984) popularized the pecking order theory, which states that equity is a less preferred means of raising capital because when managers (who are assumed to know more about the true condition of the firm than investors) issue new equity, investors believe that managers believe the firm is overvalued and that managers are profiting from this overvaluation. As a result, investors will give the new share offering a lesser value. The pecking order hypothesis (or pecking order model) in corporate finance states that when asymmetric knowledge becomes more prevalent, the cost of borrowing rises. Businesses should prioritize their funding sources, going from internal (cash flow or the entrepreneur's personal capital) to external investment, according to this theory. Internal cash, debt, and new stock are the three sources of funding. Companies prioritize their funding sources, choosing internal financing first, followed by debt, and finally obtaining equity as a "last resort." As a result, internal finance is employed first, followed by debt, and then, when it is no longer feasible to issue more debt, stock is issued. This theory holds that firms follow a hierarchy of funding sources, preferring internal financing when it is available and debt over equity when external financing is required (equity would imply issuing shares, which would imply bringing external ownership into the organization). As a result, the type of debt a company chooses might serve as an indication of its need for outside capital (Frank, & Goyal, 2018). In the present study, the pecking order theory serves as a basis to describe the prioritization of funding sources of small and medium enterprises.

2.2.2 Financial Led Growth Theory

According to the financial led growth theory, financial institutions' operations are an excellent tool for improving the economy's productive capacity. They claimed that countries with well-developed financial systems prosper more quickly. Following the global financial crisis of 2008-2010 and Nigeria's economic and financial recession of 2015-2017, the causal link between the financial sector and economic growth has spurred economic and financial discussion. Granger creates economic growth through financial intermediation to the real economic sectors, which was first investigated by Schumpeter in 1911. (Udo et al., 2019). Robinson (1952) counters that economic growth drives financial sector expansion through the growth rate of GDP per capita. The supply-led growth and demand-led growth theories both advocate for the causal link. Patrick (1966) referred to these approaches as finance led-growth and growth led-finance. The core premise is that finance-led growth and growth-led finance work together to buffer internal and foreign economic and financial shocks while also promoting economic and financial development. According to Adeyeye et al. (2015), economic growth is stimulated by resourceful mobilization and circulation of financial resources for investment. According to King and Levine (1993), economic growth is determined by financial system stability in investment, instruments, domestic saving, services, capital productivity, and efficient information management. The supply-led growth hypothesis implies a link between finance and economic growth (Ndubuisi, 2017). In the present study, the finance-led growth theory serves as a yard stick to describe and measure economic growth as affected by well-developed financial system.

2.3 Empirical Framework

Gololo (2017) examined the role of commercial banks in funding small and medium scale enterprises in Nigeria. The purpose of this study is to determine the extent to which commercial banks in Nigeria assist small and medium-sized businesses with their financing needs. Secondary data was used in the study, which used the ratio of commercial bank loans to Small and Medium Scale Enterprises as a percentage of overall credit for the years 1991 to

2012. The study employed a paired sample t-test to investigate the significance of the ratio of loans to Small and Medium Scale Enterprises in order to assess the performance of the Small and Medium Scale Enterprises Equity Investment Scheme by banks in providing credit to Small and Medium Scale Enterprises. The results showed that commercial bank loans had no substantial positive influence on loan disbursement to finance SMEs, even after the equity plan was implemented.

Nnabu, Udude and Egbeoma (2017) empirically studied the impact of commercial bank credit to SMEs on unemployment reduction in Nigeria. On annual data from 1992 to 2014, the study used the Vector Error Correction Model (VECM) Approach. All variables have a unit root at the level, but are stationary after the first difference, according to the Augmented Dickey-Fuller (ADF) unit root test. The VECM reveals that bank credit to SMEs and personal savings have little effect on reducing unemployment in Nigeria, and that the country's high unemployment is due to the prevailing interest rate. The Johansen cointegration test found evidence of cointegration between bank credit to SMEs and Nigeria's unemployment rate, whereas the Johansen cointegration test found evidence of cointegration between bank credit to SMEs and Nigeria's unemployment rate.

Muhammad et al. (2018) made a comparative analysis of the more workable SMEs financing in Nigeria. The study examines whether conventional bank usury is more viable for SMEs' growth and innovation than Islamic bank mudharabah financing using the net present value (NPV) technique. From 2000 to 2017, the difference between the present value of all loans received and the discounted loans payable demonstrated that Islamic bank mudharabah has a positive and larger NPV than usury financing, making it significantly better and more worthwhile for businesses to expand and innovate.

Olaoye, Adedeji, and Ayeni-Agbaje (2018) examined commercial bank lending to small and medium-sized businesses and the Nigerian economy over a twenty-year period, from 1998 to 2017. The study looked at the impact of the average commercial bank lending rate, commercial bank loans, and inflation rate on SMEs growth in Nigeria, as well as the causal relationship between explanatory factors and GDP in Nigeria. For the study period, secondary data was gathered from the Statistical Bulletin of the Central Bank of Nigeria and the National Bureau of Statistics. Descriptive analysis, correlation analysis, ordinary least squares regression analysis, and Granger causality analysis were used to examine the data. Commercial bank loans to SMEs had a negative and minor influence on the gross domestic product (p0.05), according to the data. The average commercial bank lending rate to small businesses had a negative and minor influence on GDP (p>0.05). Meanwhile, the study found that the rate of inflation has a negligible beneficial impact on the gross domestic product (p>0.05). The findings also revealed that there is no causal relationship between the Nigerian economy measured in terms of GDP and exploratory variables (commercial bank loans to SMEs, average commercial bank lending rate to SMEs, inflation rate), but that there is a causal relationship between average commercial bank lending rate to SMEs and commercial bank loans to SMEs.

Ovat (2020) studied the role played by commercial banks' credit in facilitating the growth of SMEs in Nigeria. In order to conduct this empirical investigation, it used co-integration and error correction procedures. The findings found that commercial banks' loan has had little impact on the expansion of Nigeria's small and medium-sized businesses.

Ikechi and Nwadiubu (2021) evaluated the effect of commercial bank loans on the performance of small and medium scale enterprises in Nigeria. The examination used an ex-post facto research methodology; to determine associations, a least square regression analysis was performed on time-series data, and unit root tests were used to avoid the formation of misleading results. The study's findings revealed that in Nigeria, there is an inverse link (albeit not statistically significant) between the quantity of commercial bank loans

(CBLSME) made available to SMEs and their output (OPSME). The study also found that an apparent increase in SMEs' operations may not have reduced Nigeria's unemployment rate because a large percentage of SMEs' employees are likely underemployed. Finally, our commercial banks' incapacity to provide effective loans to SMEs has resulted in a low ratio of SMEs' output to GDP. This has had a detrimental influence on average capacity utilization, resulting in a rise in Nigeria's already high unemployment rate.

Olowookere and Hassan (2021) examined the relationship between SMEs financing and sustainable economic growth between 1992 and 2019 has been carried out in this study. The study used a Fully Modified Ordinary Least Square and Granger causality technique after performing several pre-estimation tests such as unit root and cointegration. As a result of this research, the following key findings emerged: broad money supply and GDP growth rate show an insignificant inverse relationship. The relationship between commercial bank loans to SMEs and GDP growth rate is positive and significant. Gross fixed capital creation and total lending to the private sector from commercial banks had a negligible positive connection with GDP growth. Furthermore, a one-way causation exists between broad money supply and gross fixed capital formation. Similarly, there is a one-way feedback loop between GDP growth and commercial bank loans to SMEs. As a result, it might be argued that SMEs financing contributed to Nigeria's long-term economic growth. On the other hand, commercial banks' loans to SMEs in Nigeria are motivated by long-term economic growth.

2.4 Analytical Framework

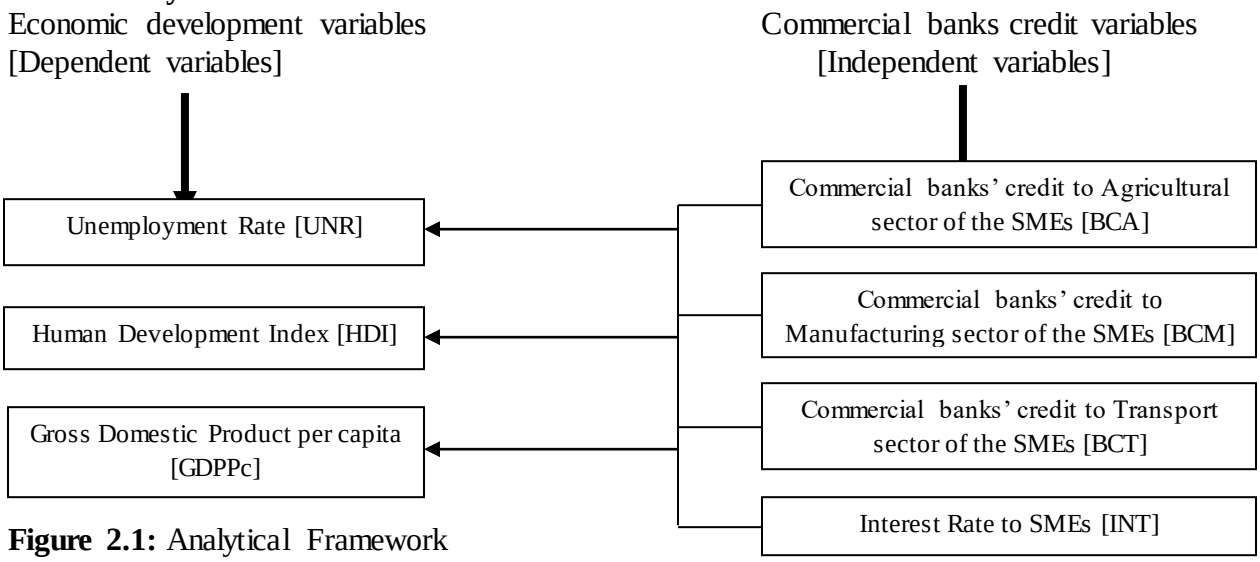

Figure 2.1: Analytical Framework

3. METHODOLOGY

3.1 Research Design

The researcher adopted ex post facto research design because of time series data used in the analysis. This, therefore, will ensure a detailed quantitative and qualitative data for analysis as well as a valid solution.

3.2 Method of Data Collection

The study made use of secondary sources in order to meet the information requirement, as well as for accuracy and precision of data. The data used in this study were sourced from the Central Bank of Nigeria Statistical Bulletin, the National Bureau of Statistics and World Bank Indictors, 2019. Data collection was mainly on the key variables which include Unemployment rate (UNR), Human development index (HDI), Gross Domestic Product per capita (GDPPc), Commercial Bank Credit to Agricultural sector of the small and medium

enterprises (BCA), Commercial Bank Credit to Manufacturing sector of the small and medium enterprises (BCM), Commercial Bank Credit to Agricultural Transport sector of the small and medium enterprises (BCT), and Interest rate (INT). The data used are absolute aggregates for the variable obtained for the period 1990 – 2019 (29 years). The period chosen for the study encompasses the phases of some of the reforms in the financial system in Nigeria. Also, the period is chosen so as to allow for the full embodiment of the government policies in favour of SMEs.

3.3 Method of Data Analysis

The method adopted for evaluation of the model is the multiple linear regression method of ordinary least square (OLS). For actual test of hypotheses, F-statistics and t-statistics were used. The R^2 indicates the degree or strength of association or correlation between the dependent and independent variables. The Durbin-Watson statistic indicates the randomness of the error term between members of the same series of observations. Put differently, it is used to test for serial correlation of the errors corresponding to different observations. Prior to the regression model, preliminary tests were conducted using: Augmented Dicky-Fuller unit root to test the stationarity of the variables; Johansen cointegration to test long-term autocorrelation; and Granger causality test to check the determinants of the variables.

3.3.1 Model Specification

To hold firm the influence of the random variables in the present study, the equation is explicitly log-linearised into the following:

$$\ln UNR = b_0 + b_1 \ln BCA_t + b_2 \ln BCM_t + b_3 \ln BCT_t + b_4 \ln INT_t + U_t \quad [1]$$

$$\ln HDI = b_0 + b_1 \ln BCA_t + b_2 \ln BCM_t + b_3 \ln BCT_t + b_4 \ln INT_t + U_t \quad [2]$$

$$\ln GDPPc = b_0 + b_1 \ln BCA_t + b_2 \ln BCM_t + b_3 \ln BCT_t + b_4 \ln INT_t + U_t \quad [3]$$

Where:

ln	=	Natural Logarithm
UNR	=	Unemployment Rate
HDI	=	Human Development Index
GDPPc	=	Gross Domestic Product per capita
BCA	=	Commercial banks' credit to agricultural sector of SMEs
BCM	=	Commercial banks' credit to manufacturing sector of SMEs
BCT	=	Commercial banks' credit to transport sector of SMEs
INT	=	Interest rate
b_0	=	Constant
b_1 to b_4	=	Parameter estimates
Ut	=	Error term

3.3.2 Decision Rule

If the P-value is less than 0.05 alpha level, the null hypothesis of no significant relationship will be rejected. But if the P-value is greater than 0.05 alpha level, the null hypothesis will be accepted.

3.3.3 The *a priori* expectations

In the absence of any systematic effects due to one or more other factors, *a priori* expectations for the models are as follows:

i. For equation 1: $\beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 < 0$.

ii. For equation 2: $\beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 < 0$.

iii. For equation 2: $\beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 < 0$.

RESULTS AND DISCUSSIONS

4.1 Unit Root Test Results

Table 1: Unit Root Test

Variable	T-Stat	Critical Values			Lagged Diff.	Probability
		1%	5%	10%		
At Level						
UNR	-4.358832	-3.769597	-3.004861	-2.642242	7	0.0027
HDI	-3.270643	-3.679322	-2.967767	-2.622989	0	0.0259
BCM	-3.840144	-3.72407	-2.986225	-2.632604	4	0.0077
At 1st Diff.						
BCA	-6.145256	-3.689194	-2.971853	-2.625121	0	0.0000
BCT	-5.833693	-3.689194	-2.971853	-2.625121	0	0.0000
INT	-2.999778	-3.679322	-2.967767	-2.622989	0	0.0467
At 2nd Diff.						
GDPPc	-7.20302	-3.699871	-2.976263	-2.62742	0	0.0000

Source: Computer output

The Augmented Dickey Fuller test was conducted on all the variables and the result (Table 1) gotten, showed that UNR, HDI, BCM were stationary at level since their t-statistic values were greater than the critical values at 5%. The BCA, BCT, and INT were stationary at second (1^{st}) difference. However, GDPPc was stationary at second (2^{nd}) difference. This result implies that regression on these variables will not yield spurious result. This result shows that regression on these variables will not yield spurious result. This is agreement with Imoughele and Ismaila (2014) who established that interest rate and banks credit were stationery and level and first difference respectively. Also, in the findings of Ikechi & Nwadiubu (2021), interest rate and unemployment rate were stationary at first and second difference respectively.

4.2 Cointegration Test Result for UNR and Bank credit variables

Table 2: Unrestricted Co-integration Rank Test 1

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.683385	32.20192	33.87687	0.0781
At most 1	0.570560	23.66767	27.58434	0.1468
At most 2	0.428886	15.68467	21.13162	0.2438
At most 3 *	0.400153	14.31024	14.26460	0.0492
At most 4	0.000178	0.004987	3.841466	0.9427

Max-eigenvalue test indicates no cointegration at the 0.05 level
* signifies rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: Computer output

The result (Table 2) showed no cointegrating variables at 5% critical value. The likelihood ratio values (Max-Eigen Stat.) of the variables are less than or equal to their respective 5 percent critical values. Again, from the decision rule, the probability values are greater than or equal to 0.05 (critical value), we therefore, conclude that there was no long run equilibrium relationship between the dependent variable (UNR) and the independent variables (BCA, BCM, BCT and INT). This is consistent with Imoughele and Ismaila (2014) which revealed that various commercial bank credit supplies have a long-run relationship with sectoral output performance in Nigeria. The result indicates that in the long run, the dependent variables can be efficiently anticipated using the specified independent variables and, thus, error correction model can be estimated.

4.3 Cointegration Test Result for HDI and Bank credit variables

Table 3: Unrestricted Co-integration Rank Test 2

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.720043	35.64729	33.87687	0.0304
At most 1	0.617224	26.88856	27.58434	0.0612
At most 2	0.482748	18.45832	21.13162	0.1136
At most 3	0.137819	4.152123	14.26460	0.8430
At most 4	0.096791	2.850445	3.841466	0.0913

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level
* indicates rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values
Source: Computer output

The result (Table 3) showed one (1) cointegrating variable at 5 percent critical value. The likelihood ratio value (Max-Eigen Stat.) of the variable is greater than the corresponding critical value at 5 percent. Also, the probability value is greater than 0.05 (critical value), we therefore, conclude that there was a long run equilibrium relationship between the dependent variables (HDI) and the independent variable (BCA, BCM, BCT and INT). In the study of Olowookere & Hassan (2021), the various commercial bank credit supplies have a long-run relationship with sectoral output performance in Nigeria.

4.4 Cointegration Test Result for GDPPc and Bank credit variables

Table 4: Unrestricted Co-integration Rank Test 3

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.736471	37.34053	33.87687	0.0185
At most 1	0.585518	24.66029	27.58434	0.1133
At most 2	0.455446	17.01805	21.13162	0.1712
At most 3	0.297357	9.881386	14.26460	0.2198
At most 4	0.123425	3.688530	3.841466	0.0548

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level
* means rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values
Source: Computer output

The result in Table 4 presented 1 cointegrating variable at 5% critical value. The likelihood ratio value is greater than the respective 5 percent critical value. The probability value is greater than or equal to 0.05 (critical value), we therefore, reject the null hypothesis, and conclude that there was a long run equilibrium relationship between GDPPc and commercial banks' credit (BCA, BCM, BCT and INT). The result indicates that in the long run, the dependent variables can be efficiently anticipated using the specified independent variables and, thus, error correction model can be estimated (Imoughele & Ismaila, 2014; Olowookere & Hassan, 2021).

4.5 Granger Causality Test Result for UNR and Bank credit variables

Table 5: Granger Causality Test 1

Null Hypothesis:	Obs	F-Statistic	Prob.
LNBCA does not Granger Cause LNUNR	28	2.08951	0.1466
LNUNR does not Granger Cause LNBCA		0.21922	0.8048
LNBCM does not Granger Cause LNUNR	28	0.95970	0.3978
LNUNR does not Granger Cause LNBCM		0.61801	0.5477
LNBCT does not Granger Cause LNUNR	28	2.51025	0.1033
LNUNR does not Granger Cause LNBCT		0.11892	0.8884
LNINT does not Granger Cause LNUNR	28	0.27795	0.7598
LNUNR does not Granger Cause LNINT		1.81216	0.1859

Source: Computer output

The results in Table 5 suggest that all the variables tested (BCA, BCM, BCT, and INT) does not Granger Cause Unemployment rate (UNR) as their corresponding p-values showed no significant ($p>0.05$) relationship with UNR.

4.6 Granger Causality Test Result for HDI and Bank credit variables

Table 6: Granger Causality Test 2

Null Hypothesis:	Obs	F-Statistic	Prob.
LNBCA does not Granger Cause LNHDI	28	3.07026	0.0658
LNHDI does not Granger Cause LNBCA		1.51541	0.2409
LNBCM does not Granger Cause LNHDI	28	2.88425	0.0763
LNHDI does not Granger Cause LNBCM		3.63523	0.0425
LNBCT does not Granger Cause LNHDI	28	1.86613	0.1774
LNHDI does not Granger Cause LNBCT		2.40755	0.1124
LNINT does not Granger Cause LNHDI	28	0.17718	0.8388
LNHDI does not Granger Cause LNINT		1.17867	0.3256

Source: Computer output

The results in Table 6 suggest that all the variables tested (BCA, BCM, BCT, and INT) does not Granger Cause Human Development Index (HDI) as their respective p-values showed no significant (p>0.05) causal relationship with HDI.

4.7 Granger Causality Test Result for GDPPc and Bank credit variables

Table 7: Granger Causality Test 3

Null Hypothesis:	Obs	F-Statistic	Prob.
LNBCA does not Granger Cause LNGDPPC	28	0.30109	0.7429
LNGDPPC does not Granger Cause LNBCA		1.42905	0.2600
LNBCM does not Granger Cause LNGDPPC	28	1.02643	0.3741
LNGDPPC does not Granger Cause LNBCM		2.23478	0.1297
LNBCT does not Granger Cause LNGDPPC	28	0.70837	0.5029
LNGDPPC does not Granger Cause LNBCT		1.87438	0.1761
LNINT does not Granger Cause LNGDPPC	28	5.17083	0.0140
LNGDPPC does not Granger Cause LNINT		1.36169	0.2761

Source: Computer output

The results in Table 7 suggested that among the variables tested, BCA, BCM, and BCT does not Granger Cause GDPPc; but on the contrary, INT is a determinant of the GDPPc as its respective p-value showed a significant (p<0.05) causal relationship with GDPPc. The results of the causality test are in consensus with the findings of Olaoye, Adedeji, & Ayeni-Agbaje (2018) which revealed that there is no causal relationship between commercial bank loans to SMEs, average commercial bank lending to SMEs and Nigeria economy measured in terms of gross domestic product, while there was a causal relationship between Average commercial bank lending rate to SMEs and commercial bank loans to SMEs.

4.8 Regression Result for UNR and Bank credit variables

Table 8: Regression Result 1

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.423185	0.347261	-1.218634	0.2344
LNBCA	0.180702	0.118502	1.524878	0.1398
LNBCM	-0.064473	0.098928	-0.651713	0.5205
LNBCT	-0.005681	0.020006	-0.283940	0.7788
LNINT	0.634556	0.229522	2.764684	0.0105
R-squared	0.582643	Mean dependent var		0.625291
Adjusted R-squared	0.515866	S.D. dependent var		0.114998
S.E. of regression	0.080015	Akaike info criterion		-2.062194
Sum squared resid	0.160060	Schwarz criterion		-1.828661
Log likelihood	35.93290	Hannan-Quinn criter.		-1.987484
F-statistic	8.725187	Durbin-Watson stat		0.814450
Prob(F-statistic)	0.000149			

Dependent: UNR
Source: Computer output

The relationship model is estimated as thus:
LNUNR = -0.4232 + 0.1807*LNBCA - 0.0645* LNBCM - 0.0057*LNBCT + 0.6346*LNINT
From the results in Table 4.10, the p-values showed that among the variables tested, only INT (p=0.0105) had a significant impact on UNR. The Beta coefficients showed that BCA (0.180702) and INT (0.634556) had positive relationship with UNR, while BCM (-0.064473) and BCT (-0.005681) had negative relationship with UNR. The R^2 value of 0.582643 showed that 58.3% of the variations in UNR are accounted by the four independent variables (BCA, BCM, BCT, and INT); while the remaining 41.7% are accounted for by the other variables not captured in the model. This result is in line with the findings of Gololo (2017) which shows that commercial banks loans does not make significance positive impact on loan disbursement to finance SMEs. Contrariwise, the results from the study of Ayuba & Zubairu (2015) showed that banking sector credit had a statistically significant relationship with growth of SMEs in Nigeria. From their study also, macroeconomic variables such as exchange and interest rates were negatively and positively significant respectively.

4.9 Regression Result for HDI and Bank credit variables

Table 9: Regression Result 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.556061	0.039783	-13.97743	0.0000
LNBCA	0.026586	0.013576	1.958307	0.0614
LNBCM	0.050453	0.011333	4.451724	0.0002
LNBCT	-0.002654	0.002292	-1.157843	0.2579
LNINT	0.033495	0.026294	1.273839	0.2144

R-squared	0.973231	Mean dependent var	-0.340506
Adjusted R-squared	0.968948	S.D. dependent var	0.052020
S.E. of regression	0.009167	Akaike info criterion	-6.395480
Sum squared resid	0.002101	Schwarz criterion	-6.161948
Log likelihood	100.9322	Hannan-Quinn criter.	-6.320771
F-statistic	227.2319	Durbin-Watson stat	1.055084
Prob(F-statistic)	0.000000		

Source: Computer output

The relationship model is estimated as thus:
LNHDI = -0.5561 + 0.0266*LNBCA + 0.0505*LNBCM - 0.0027*LNBCT + 0.0335*LNINT
From the results in Table 4.11, the p-values showed that among the variables tested, BCM (p=0.0002) had a significant impact on HDI. The Beta coefficients showed that BCA (0.026586), BCM (0.050453) and INT (0.033495) had positive relationship with HDI, while BCT (-0.002654) had a negative relationship with HDI. The R^2 value of 0.973231 showed that BCA, BCM, BCT, and INT explain changes in the HDI at 97.3%, while the remaining 2.7% can be attributed to other variables not captured in the model. This result is closely related to the findings of Olowookere & Hassan (2021) which ascertained that commercial banks loans to SMEs and GDP growth rate possess a positive and significant relationship. In the study of Imoughele and Ismaila (2014), Commercial banks' credit to small scale

enterprises has an insignificant positive relationship with growth of SMEs suggesting that its contribution to the sector is low as results of the stringent policy put in place to assess credit facility from the bank and the proximity of bank to SMEs.

4.10 Regression Analysis for GDPPc and Bank credit variables

Table 10: Regression Result 3

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.086542	0.260237	11.86049	0.0000
LNBCA	0.101848	0.088805	1.146861	0.2623
LNBCM	0.817454	0.074137	11.02632	0.0000
LNBCT	-0.014189	0.014993	-0.946384	0.3530
LNINT	-0.153468	0.172003	-0.892236	0.3808
R-squared	0.992848	Mean dependent var		5.043214
Adjusted R-squared	0.991704	S.D. dependent var		0.658337
S.E. of regression	0.059963	Akaike info criterion		-2.639162
Sum squared resid	0.089889	Schwarz criterion		-2.405629
Log likelihood	44.58743	Hannan-Quinn criter.		-2.564453
F-statistic	867.6575	Durbin-Watson stat		1.122573
Prob(F-statistic)	0.000000			

Source: Computer output

The relationship model is estimated as thus:
LNGDPPC = 3.0865 + 0.1018*LNBCA + 0.81745*LNBCM - 0.0142*LNBCT - 0.1535*LNINT.
From the results in Table 4.10, the p-values showed that among the variables tested, BCM (p=0.0000) had a significant impact on GDPPc. The coefficients showed that BCA (0.101848), and BCM (0.817454) had positive relationship with GDPPc, while BCT (-0.014189) and INT (-0.153468) had negative relationship with GDPPc. The R^2 value of 0.992848 showed that BCA, BCM, BCT, and INT explain changes in the GDPPc at 99.3%, while the remaining 0.7% can be attributed to other variables not captured in the model. This result is in line with the findings of Mohammed (2013) and Dada (2014) who reported that commercial bank credit had direct impact on the growth of SMEs. Contrariwise, Ubesie et al. (2017) established that bank interest rate had a serious significant effect on small and medium scale enterprises in Nigeria.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusions

The following conclusions were drawn based on the findings of this study:
There was a significant relationship between commercial banks' credits to the sectors of SMEs and unemployment rate in Nigeria, as commercial bank credit to agricultural sector, commercial bank credit to manufacturing sector, commercial banks credit to transport sector and interest rate jointly explains changes in the unemployment rate in Nigeria at 58.3% within the period under study.
There was a significant relationship between commercial banks' credit to the sectors of SMEs and human development index in Nigeria, as commercial bank credit to agricultural sector, commercial bank credit to manufacturing sector, commercial banks credit to transport sector

and interest rate jointly explains changes in the Human Development Index in Nigeria at 97.3% within the period of the study.

There was a significant relationship between commercial banks' credit to the sectors of SMEs and the gross domestic product per capita in Nigeria. commercial bank credit to agricultural sector, commercial bank credit to manufacturing sector, commercial banks credit to transport sector and interest rate collectively account for 99.3% variations in Gross Domestic Product per capita for the specified period under study.

In a nutshell, there was a significant influence of commercial banks' credit to SMEs on economic development of Nigeria.

5.2 Recommendations

From the findings of the study, the following recommendations were made:

- **i.** Small and medium scale business entrepreneurs should constantly engage in capacity building, training, research and development. This is to develop their competencies in managing and sustaining their investments.
- **ii.** There is a need to channel more credit into the agriculture and manufacturing sectors of the SMEs. This will help to provide for increased efficiency, productivity and the economic development in the country.
- **iii.** The Central Bank of Nigeria should fine-tune the rate of interest to encourage productive SME funding and investment.
- **iv.** Also, lending should be supported by monitoring and enforcement to ensure viable investment. This will help curtail unemployment rate in the country.

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