European Institute of Knowledge & Innovation

Journal of Economics, Innovative Management, and Entrepreneurship (JEIME) ISSN: 3029-0791

Research Article

Impact of Development Bank's Credit Financing on Small and Medium-Scale Enterprises Performance

Obida Gobna Wafure[1], Ibrahim Musa[1*], and Kayode Ajibola Yetunde[1]

[1] University of Abuja, Nigeria
* Correspondence: ibrahim.musa@uniabuja.edu.ng

https://doi.org/eiki/10.59652/jeime.v2i3.226

Abstract: This study examined the impact of Development Bank Credit Financing (DBCF) on the performance of small and medium enterprises, employment generation growth, financial asset growth and profit growth in Nigeria. A survey research design was employed; 398 SMEs were randomly selected from the beneficiaries of DBCF loans. Descriptive analysis was conducted, and binary logistic regression was employed to examine the impact of DBFC on SMEs. The result showed that the DBCF Amount of Credit Loan Received (ACLR) positively impacted the growth of SMEs, given their beta coefficients of 0.510 and 0.765, respectively. Their respective p-values and Wald statistics of 0.001, 0.001 and 14.050, 13.486 show their significance level. However, it was discovered that there is no significant impact of DBCF on the profit growth of SMEs in Nigeria. The average monthly tax payment (AVMTL) made by the micro, small and medium enterprises (MSMEs) was established to negatively impact on SMEs profit. The coefficient (β) = - 1.004 (100.4%) showed that a unit change in the AVMTL while holding other variables constant led to about 1.004 unit decline in the logit, SMEs profit. Specifically, it means MSMEs profit will decrease by the exact amount of what is paid as tax.

Keywords: development bank credit financing; small and medium enterprises (SMEs); binary logistic regression, SMEs

1. Introduction

Over the years, the life wire of many successful economies of the world has been traceable to the performance of their small businesses (Magaji, Muhammed, & Abubakar, 2015). Hence, all over the world, small and medium-scale enterprises (SMEs) have been recognised as an essential factor in modern economies because of their significant contributions to global economic growth and sustainable development through employment generation, poverty alleviation, wealth creation, and food security (Peter et al., 2018). The central role played by small and medium enterprises (SMEs) and their contribution to the socio-economic development of nations has been well documented in the literature.

SMEs account for 90% of all businesses globally. Likewise, SMEs were reported to generate 60% of employment worldwide and provide jobs to roughly 80% of the workforce in the developed world (Peterhoff, Romeo, & Calvey, 2014; Zidana, 2015; World Bank, 2021). Africa, too, is included, as small enterprises are the leading force in developing African economies and are essential for economic growth in many of her developing countries. According to the World Bank, small businesses account for 90% of all African businesses and represent 38% of the region's Gross Domestic Product (GDP). They also play essential roles in the process of industrialisation and economic growth. It is obvious today that a country can only achieve the goal of growth and development with the rapid development of its SMEs (Aluko, 2008; Magaji, 2004).

Furthermore, SMEs stimulate private ownership and entrepreneurial skills (Maggaji, Ibrahim & Abdullahi, 2024; Musa et al., 2022). The role of these businesses in an economy has been highlighted to include mobilization of domestic savings for investment, enhancement of real sector growth, creation of employment, poverty reduction, increase in income per capita, high living standard, economic diversification, promoting technological advancement and innovative industrial sector, curbing rural-urban migration and contribution to overall growth and development of the country to mention a few (Motilewa, Ogbari, &

Received: June 18, 2024
Accepted: July 05, 2024
Published: July 14, 2024

Aka, 2015). Hence, any effort geared towards advancing an economy without adequate support for developing SMEs will not likely produce favorable outcomes in the long run. (Bubou et al., 2014; Magaji & Saleh, 2010).

Also, in achieving Sustainable Development Goals (SDGs), most especially goals number one and eight, which are to end poverty in all its forms everywhere and promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all depends to a large extent on the performance of SMEs because of its role in generating employment both in developed and developing countries as documented in the literature. The SDG targets are ambitious and require transforming public and private activities. This transformation is associated with adopting new business models, bringing innovation, and doing business differently, more sustainably, and ethically (Magaji & Aliyu, 2007). This process opens up new business opportunities for the private sector, particularly for SMEs. These new opportunities can be fully utilized when adequate financing is made available to SMEs

Although there has been research work, such as (Musa, Magaji, & Salisu, 2023; Ayunkun & Eweke, 2020; Moussa, 2020), on the impact of credit financing on the performance of SMEs in Nigeria, their research focused on something other than Development Bank credit. However, the focus of this research work is exclusively on DBCF credit.

This study, therefore, sheds more light on this ongoing debate and contributes to the literature by examining the impact of credit financing from a public financial institution such as the Development Bank of Nigeria on the performance of SMEs in Nigeria. It is necessary to justify their presence and examine whether it is making a real economic impact. Therefore, this study aims to contribute to the literature by investigating how access to finance through DBCF impacts the performance of SMEs in Nigeria.

The aim and objective of this study therefore, is to examine the impact of credit financing from a public financial institution such as the Development Bank of Nigeria on the performance of SMEs in Nigeria. There is the need to justify their presence and also examine whether their presence is making real economic impact or not. It is therefore the goal of this study to contribute to the literature by investigating how access to finance through DBN impacts on the performance of SMEs in Nigeria.

2. Literature Review

2.1. Conceptual Framework

2.1.1. Development Bank and Credit Financing

To define DBCF, there is a need to understand what Development Bank and Credit financing are clearly. Development Banks are financial institutions typically offering subsidized, long-term financing for industrial development. The tools employed by each bank vary, but in general, include medium- to long-term credit, subsidized interest rates, credit guarantees, equity, and technical assistance while targeting industrial production and other businesses to foster their performance (Lazzarini et al., 2015). To understand the concept of the Development Bank, we need to understand what makes it different from other types of banks, and the difference makes it possible to understand it better. The standard type of bank is a commercial bank; this bank differs from Development Bank in that it is a privately owned commercial institution licensed by a government financial authority to engage in banking with the public (Bruck, 1998). The primary goal of commercial banks is profit maximization. In contrast, the goal of Development Banks is not profit maximization but rather to fill the financing gaps that other financial institutions cannot cover (Magaji, Musa, Ahmad & Eke, 2024). Therefore, a Development Bank is a government financial institution saddled with the responsibility of providing short to medium-term loans that will foster the productivity of enterprises in the country. They alleviate capital scarcity and promote entrepreneurial action to boost new or existing industries (Cameron, 1961).

2.1.2. SMEs Performance

A clear understanding of small and medium-scale enterprise performance can be obtained by clearly defining what small and medium enterprise is and what performance means. When attempting to clarify what SMEs are, there is no commonly accepted definition of small or medium businesses because classifying businesses into a large, medium or small-scale is a subjective and qualitative judgment (Ogboru, 2007). The definition ranges from the national perspective to the global perspective depending on factors such as business culture, the size of the country's population, industry, the amount of profit generated, the level of

economic development and the level of international economic integration.

Multilateral development institutions define small businesses commonly using quantitative measures. The World Bank Enterprise Survey (WBES) classifies enterprises according to their number of employees. They categorize enterprises with 5-19 employees as small enterprises and those with 20-99 as medium-scale enterprises. The World Bank Group gives a slightly different categorisation by giving three quantitative criteria for defining SMEs: the number of employees, total assets in U.S. dollars, and annual sales in U.S. dollars (Tebaldi & Elmslie, 2008). A business must meet the quantitative criteria of the number of employees and at least one financial criterion to be categorized as a micro, small or medium business. In using the number of employees, micro-enterprises are categorized as those firms with 0-10 employees, a total asset or total annual sales of 100,000 dollars or less. Small enterprises have 10-49 employees with a total asset or annual sales of 100,000 to 300,000,000 dollars.

Meanwhile, medium enterprises have 50-299 employees with total assets or annual sales of 3,000,000 to 15,000,000 dollars (World Bank, 2014). The Bank Group's research suggests in a review of 132 country standards of what constitutes an SME and concluded that 250 employees is the most common upper bound for defining SMEs. However, this definition is inappropriately high in many countries because it includes the entire, or almost the entire, formal private sector, including the largest firms in some economies. Therefore, it is not a meaningful distinction between SMEs and large enterprises (World Bank, 2014).

2.2. Theoretical Foundation

2.2.1. Classical Theory of Firm Growth

The classical theory of the firm as updated by Will Kenton (2023) is also known as the traditional theory of the firm. It is based on the work of early economists such as David Ricardo and Leon Walras. The theory is based on certain assumptions that firms seek to maximize their profit. There is no information asymmetry because owners and workers of the firm have good information, enabling them to maximize profit, and firms act as a homogeneous unit with owners wishing to maximize profit. Profit maximization occurs at an output where marginal revenue equals marginal cost; firms and managers are rational.

Scottish economist Adam Smith was the leading figure of the classical theory of growth. Smith wrote that the division of labor among workers into more specialized tasks was the driver of growth in the transition to an industrial, capitalist economy. As the Industrial Revolution matured, Smith argued that the availability of specialized tools and equipment would allow workers to further specialize and thereby increase their productivity. In order for this to happen, ongoing capital accumulation was necessary, which depended on the owners of capital being able to keep and reinvest profits from their investments. He explained this process with the metaphor of the "invisible hand" of profits, which would push capitalists to engage in this process of investment, productivity gains, and reinvestment by seeking their own personal gain, and indirectly the benefit of the entire nation.

David Ricardo extended Smith's theory to demonstrate how trade could lead to further economic prosperity on top of the gains from specialization and the division of labor. He developed the concept of comparative advantage as a basis for specialization and applied this not only to workers in a single economy but to separate nations that could trade with one another. Ricardo argued that by specializing in activities for which they each had the lowest opportunity cost and then trading their surplus product, nations (and by extension workers and firms within an economy) could all be made better off. Ricardo's theory of comparative advantage strengthened the foundation of Smith's theory of specialization and division of labor as a source of economic growth.

However, the classical theory of firm growth can be criticized based on the argument of modern economist theories. Some of the arguments put forward by modern economists include the following: firms are not a homogeneous unit. That is, owners may desire profit maximization while managers and workers may have a different objective from the owners; firms might have other objectives apart from profit maximization, sales maximization, market share maximization, and social responsibility. Also, the marginal approach to the firm is not practicable in the real world because people in business do not have the ability and time to work out the marginal cost and marginal revenue; information asymmetry is expected in the real world if business owners do not have perfect information that will help them maximize profit most of the time.

2.3. Review of the Empirical Literature

Adelekan, Eze and Majekodunmi (2019) examined the link between bank loans (measured by access to loan and debt financing) and SME performance (measured by business expansion and output) in Lagos, Nigeria. The study adopted the survey research design. The population for this study consists of 11,663 SMEs in Lagos State, Nigeria. The Yamane sample size determination formula was employed, which gave a sample size of 372. The survey research design was adopted in the study by administering structured questionnaires to selected chief executives of SMEs in Lagos. Two hypotheses were formulated, and Pearson correlation analysis was employed to ascertain the association between bank loans and SMEs performance. The findings revealed that access to loans is positively associated with the business expansion of SMEs in Nigeria ($r = 0.801$, p-value<0.05); also, debt financing is positively associated with outputs of SMEs in Nigeria ($r = 0.894$, p-value<0.05). Therefore, bank loans are strongly associated with SMEs' performance, particularly business expansion and output.

Khan (2020) studied microfinance banks' credit financing and its impacts on SMEs in Nigeria, explicitly referring to Damaturu in Yobe state. The study used representative random sampling and administered fifty (50) questionnaires, of which forty-one (41) were correctly filled and returned. For data analysis, the research used the Chi-square tool to test the formulated hypotheses. It was concluded that microfinancing does have a significant effect on the growth of small and medium-scale enterprises in Damaturu, and there is a significant relationship between the severity of borrowing conditions of Microfinance Banks and the development of small-scale enterprises in Damaturu.

Ayunku and Ewek (2020) examined the impact of banks' credit finance and macroeconomic dynamics on Small and Medium-Scale Enterprises in Nigeria using annual data from 1992–2016. The long-run and short-run relationships among the variables were examined via the non-linear ARDL model. The Augmented Dickey-Fuller (ADF) and Philip Perron's (P.P.) test revealed that none of the variables were I(2). The Bounds test to cointegration confirms the existence of a long-run relationship. The non-linear ARDL results suggested that in both long and short-run estimations, a rise in bank credit, government tax revenue and adverse shocks in interest rate, inflation rate and exchange rate will trigger a fall in SME performance in Nigeria.

In their study, Agyeman, Quarshie and Telari Bonn (2021) examined whether access to credit impacts the performance of SME in Ghana. Survey methodology was used to collect data for the study by administering questionnaires. Purposive sampling techniques were used to arrive at a sample of 65. Data was analyzed using the Predictive Analytics Software (PASW) version 20. Pearson's correlation coefficient was used to find the relationship between access and performance of SMEs, and the finding revealed a positive relationship of 0.368. This shows a strong relationship between access to finance and the performance of SMEs.

Babajide (2011) analyzed the effects of microfinance credit financing on Micro and Small Enterprises (MSEs) growth in Nigeria by employing panel data and multiple regression analysis to analyze a survey of 502 randomly selected enterprises financed by microfinance banks in Nigeria. The result showed that access to microfinance does not enhance the growth of micro and small enterprises in Nigeria. However, other firm-level characteristics, such as business size and location, positively affect enterprise growth in Nigeria.

Ezeaku, Anidiobu, and Okolie (2017) assessed the effect of SME financing on manufacturing sector growth in Nigeria using annualized data from 1981 to 2014. A cointegrating relationship was determined using the Engel and Granger residual-based approach, which showed evidence of a long-run relationship between SME credit and manufacturing output growth in Nigeria. The results of the error correction model showed that SME financing had exerted a positive influence on the manufacturing sector's growth. The finding indicated that when credits to the SMEs increased by 1%, manufacturing output rose by 14.5%. The results also revealed that interest and inflation rates adversely affected manufacturing sector growth. A unit change in interest rate led to a 15.7% fall in output growth of the manufacturing sector. They concluded that while SMEs are an important sector that can drive the Nigerian economy, rising interest rates stifle their growth and overall economic impact.

Oteniya and Lawal (2021) analyzed the impact of trade credit on SMEs in Nigeria; frequency analysis, logistic regression and correlation analysis were used as the estimation techniques. The study found that the cost of trade credit has a coefficient value of 0.036, a standard error of 0.093, and a significant value of 0.701, indicating that the cost of trade credit is positively essential. However, it is not significantly accessible to SMEs. More so, credit flexibility has a coefficient value of 0.018 and a standard error of 0.091 with a sig value of

0.846, indicating that credit flexibility has a positive impact but is not significant in influencing SMEs. The study concluded that the cost of trade credit affects SMEs, and credit granted positively affects SMEs' performance.

Imisi, Okunlola and Ayedun (2021) examined the effects of credit risk management on SME performance in Ondo State. A survey research design was employed; 261 SMEs were randomly selected from the Ondo State Microcredit Agency (OSMA) beneficiaries. Descriptive analysis was conducted, and Partial Least Square- Structural Equation Modeling (PLS-SEM) was used to test the stated hypothesis. The models specified by the study are statistically significant at 5% significance level. The study showed that the exogenous construct, CRM, positively and significantly affects SMEs' endogenous construct and performance (β= 0.522, R2 = 0.383, f2 = 0.407, T= 8.763 and P< 0.05). The result also showed that only four of the six sub-constructs were significant. The "credit terms", "loan appraisal", and "loan recovery" were significant at 95% (P< 0.05), including the control variable "loan applied for", while 'loan repayment" was significant at 90%. The study concludes that credit terms, loan appraisal, loan recovery and 'loan applied for' as indicators of CRM have both positive and significant effects on SMEs' performance during the period of this study.

2.4. Gap in Literature

The review of relevant empirical literature showed that most of the studies on the impact of credit financing on the performance of SMEs focused on commercial banks and microfinance banks' credit. However, this study examined Development bank (DBCF) credit on the performance of SMEs. DBCF is a specialized financial institution aimed at improving the credit financing of SMEs, thereby improving their performance. Therefore, it is imperative to analyze its impact on the performance of SMEs.

Likewise, it was discovered that liquidity and the amount of loan utilized or its proxies have yet to be used in literature as a measure of performance and credit, respectively, in Nigeria. Since liquidity has been identified in the literature as one of the essential measures of performance, based on the premise that large firms perform better than small firms because of their high liquidity level, this necessitated the inclusion of liquidity as a measure of performance in this research work. Likewise, the proportion of loans utilized is germane in measuring performance because some SMEs receive loans and divert them to ventures other than the purpose for which the loan was secured. That is why the proportion of loans utilized was considered an essential missing variable in other literature reviewed and, therefore, considered a gap that must be filled.

Also, most of the studies reviewed made use of linear regression analysis, mostly ordinary least squares (OLS) and descriptive statistics for analysis; these methods of analysis might not be scientific enough to arrive at a reliable conclusion, which might be the reason behind the mixed outcomes of the various past research work. This research work, however, made use of binary logistic regression analysis that facilitated a more informed decision to be taken.

These reasons, as mentioned earlier, are the gaps identified in the literature and, therefore, necessitate further research on this subject matter. Hence, there is a need to undertake this research to analyze the impact of another important source of SME financing. This will strengthen the literature depth on this matter and also influence economic decisions on this topic positively

3. Materials and Methods

3.1. Research design

This study used survey- based data; specifically, questionnaire was designed to elicit relevant information from the beneficiaries of Development Bank loans in Nigeria. In achieving the research objectives, specifically quantitative data on entrepreneur's characteristics; firm's characteristics and credit facility enjoyed were collected from the beneficiaries of Development Bank credit facilities through the monitoring and evaluation department of Development Bank of Nigeria.

The choice of quantitative data is as a result of the stated objectives of the research work which is majorly on measurement of impact, nature of our targeted population which are individuals and firms with peculiar characteristics, nature of information needed to achieve the stated objectives, past empirical work reviewed and the gap in literature that we want to fill. The stated objectives required information on the characteristics of the entrepreneurs, characteristics of the firms and information about the credit facilities from DBN to SMEs

which can be gotten through survey; this necessitated the use of survey through a well-structured questionnaire consisting of open and close ended questions to elicit information needed. Binary logistic method of analysis was employed due to the nature of our dependent variables which are dichotomous in nature while our independent variables were made up of nominal and categorical variables.

3.2 Population and Sample

The population of this study is 95,000 SMEs, which have benefited from Development Bank loans since they started operation in 2017. The population is limited to this because the Development Bank started its operation in 2017; therefore, this survey entailed the population of those who benefited from the Development Bank credit facility between 2017 and 2019. 398 beneficiaries were randomly selected through simple random sampling to elicit information needed to achieve our objectives. Our sample was hitherto determined using the Taro Yamani formula, which is stated thus. Therefore, this study covers the period between 2017 to 2019.

$$n = \frac{N}{1+N(e)^2} \ldots$$

$$where\ n = sample\ size$$

$$N = Population\ of\ the\ study$$

$$e = tolerable\ error\ which\ is\ 5\%$$

$$therefore, n = \frac{95{,}000}{1+95{,}000(0.05)^2}$$

$$n = 398$$

3.3. Survey Instrument and Data Collection

The instrument used for this survey is a questionnaire; the questionnaire was structured to elicit information on the impact of the Development Bank credit facility on the performance of SMEs in Nigeria. The questionnaire was divided into three sections containing both open and close-ended questions. Section one contained information on the entrepreneur's characteristics, such as age and gender. In contrast, section two contained information about the firm's characteristics, such as the age of the business, business sector, size of the business sector, and business location, and section three contained information about loans granted and the performance of SMEs. These included the number of loans granted, the proportion of loans utilized, interest rate on loans, easiness in loan collection, modalities of loan repayment, business growth, employment growth, profit growth and growth in financial capital.

The data set was sourced through the help of the monitoring and evaluation department of the Development Bank of Nigeria. The department requested the drafted questionnaire for the research work to ascertain if such information can be obtained from their customers. After proper joint evaluation of the items of the questionnaire by the researcher and some staff of the monitoring and evaluation department, it was discovered that significant questions contained in the questionnaire that will aid in the achievement of the research objectives comply with the survey questionnaire of the monitoring and evaluation department survey of 2020.

3.4. Data Aanalysis

For proper understanding and evaluation of the research questions raised and to ultimately achieve the research objectives, descriptive statistics such as frequency tables and percentages were used to summarize the entrepreneurs' demographic variables and describe the nature of our data. In contrast, inferential statistics, specifically binary logistic regression, was further used to examine the impact of finance on various aspects of the SMEs' performance.

3.5. Model Specification

To achieve the objective of this study, the models of Babajide (2011) and Magaji, Musa

and Dogo (2023) were adopted and specified as follows:

$$SBG = \alpha_o+\alpha_1 EAge_1+ \alpha_2 EE_2+ \alpha_3 MS_3+\alpha_4 EG_4+\alpha_5 Bizage_5+\alpha_6 Bizform_6+\alpha_7 Bizsize_7 +\alpha_8 Bizloc_8+ \alpha_9 Bizreg_9+\alpha_{10} ALS_{10}+\alpha_{11} ALD_{11}+\alpha_{12} ALR_{12} + \alpha_{13} LU_{13} + \alpha_{14} TT_{14} + \mu_1$$

The variables were defined as SBG = Sales growth, $EAge_1$ = Entrepreneur Age, EE_2 = Entrepreneur Education, MS_3 = Marital Status, EG_4= Entrepreneur Gender, $Bizage_5$ = Business Age, $Bizform_6$ = Business form, $Bizsize_7$= Business Size, $Bizloc_8$= Business location, Biz reg_9 = Business registration, ALS_{10} = Asset Loan Size received from Microfinance Bank, ALD_{11}, = Asset Loan Duration, ALR_{12} = Asset Loan Repayment, LU_{13} = Loan Utilization, TT_{14} = No. The entrepreneur or his staff received technology training in the last year, U_1 = Error term. Multiple regression analysis was used in analyzing the model. However, because of the nature of our dependent variables, binary logistic regression was used in our analysis. Therefore, our logit model for objective one is written as:

$$L_1 = ln\{\frac{p_1}{1\_p_1}\} = \beta_0 + \beta_1 AGE + \beta_2 GENDER + \beta_3 BIZSIZE + \beta_4 BIZAGE +$$

$$\beta_5 ACLR + \beta_6 AOLR + \beta_7 IROL + \beta_8 ISSTB + \beta_9 HODP + \beta_{10} HPIAL + \mu$$

Where,

$L_1 = logoistic\ model\ for\ objective\ 1$ Growth of the business

$AGE = Entrepreneur\ age,$

$GENDER = Entrepreneur's\ gender$

$BIZSIZE = Business\ size,$

$BIZAGE = Age\ of\ the\ business,$

$ACLR = Amount\ of\ credity\ loan\ requested,$

$AOLR = Amount\ of\ loan\ received,$

$IROL = Intereest\ rate\ on\ loan\ received,$

$ISSTB = Impact\ of\ surpport\ and\ service\ training\ before\ loan,$

$HODP = How\ often\ do\ you\ make\ payment,$

$HPIAL = Has\ profit\ increased\ after\ loan$

$\beta_1, \beta_2, \beta_2$..... β_{10} are regression coefficients which shows the impact of the independent variables on the dependent variable u = residual or stochastic term. A priori, $\beta_1 > 0$; $\beta_2 \gtrless 0$ *0;* $\beta_3 \gtrless 0$; $\beta_4 \gtrless 0$; $\beta_5 > 0$; $\beta_6 > 0$; $\beta_7 < 0$ $\beta_8 > 0$; $\beta_9 \gtrless 0$; $\beta_{10} > 0$.

4. Results and Discussion

This study investigated the impact of DBCF on SMEs in Nigeria. To actualize the study's objectives, primary data gathered through a survey undertaken by the monitoring and evaluation department of the Development Bank of Nigeria were employed. A representative sample of 398 was planned and obtained for this study. After subjecting the items of the questionnaires to a reliability test, Cronbach's Alpha of 0.678(67.8%) implied that the items were reliable since the computed Cronbach alpha is more significant than 60%. In the first instance, data were coded in Excel and exported to Statistical Package for Social Sciences (SPSS) version 22 to derive the estimates of descriptive and inferential statistics.

4.1. Descriptive Statistics of Data

The descriptive statistics of our data are presented below:

Table 1. Distribution of respondents on the ownership of business

Are you the owner of the business?		Frequency	%	Valid %	Cumulative %
Valid	No	2	0.5	0.5	0.5
	Yes	396	99.5	99.5	100.0
	Total	398	100.0	100.0	

Source: authors' computation, 2023.

Table 1 shows the distribution of respondents by ownership of business. It was revealed from the table that 396(99.5%) of the respondents are owners of their businesses, while 2(0.5%) of the respondents were not owners of their businesses. This implies that the majority of the small and medium-scale enterprise entrepreneurs who benefit from credit financing from the Development Bank are owners of their businesses.

Table 2 demonstrates the distribution of the respondents by gender and age. It was confirmed from the table that 213(53.5%) of the respondents were female, while 185(46.5%) were male. This signifies that females are more of the beneficiaries of the Development Bank's credit facility than their male counterparts. Since it was discovered in the literature that females are discriminated against when getting loans from banks. However, from the table above, females benefitted more, which means women have been empowered, and there is no gender discrimination against women when it comes to getting DBCF credit. This is one of the reasons why the Development Bank was established: to fill the credit gap created by other credit-giving agencies. It was also discovered that most small and medium-scale entrepreneurs fall within the age bracket of 31-40 years, constituting 42.7 per cent of the total respondents. Next is the age bracket of 41-50 years, constituting 138 (34.7%) of the respondents. 47 (11.8%) of the respondents fall within the age of 51-60 years, while 35 (8.8%) are in the lower age bracket of 21-30 years. At both extreme ends of the age, brackets are less than 20 years, which constitutes 1 (0.3%) and 60 years and above comprises 7 (1.8%) of the respondents, denoting a concentration of small and medium-scale entrepreneurs on the two middle age brackets of (31-40) and (41-50) years. This signals that the active population benefits more from the Development Bank credit facility. By implication, it means there will be a reduction in youth unemployment and an increase of the female gender in productive activity.

Table 2. Distribution of respondents by gender and age

		Frequency	%	Valid %	Cumulative %
Valid	Female	213	53.5	53.5	53.5
	Male	185	46.5	46.5	100.0
	Total	398	100.0	100.0	
Valid	60 years and above	7	1.8	1.8	1.8
	51-60 years	47	11.8	11.8	13.6
	41-50	138	34.7	34.7	48.2
	31-40	170	42.7	42.7	91.0
	21-30 years	35	8.8	8.8	99.7
	20 years and less	1	0.3	0.3	100.0
	Total	398	100.0	100.0	

Source: authors' computation, 2023.

To measure the enterprise size of the entrepreneurs in terms of employees' number, it was documented in table 3 that about 87.2% of constituting 347 correspondents had between 1 to 10 employees, classified as a micro-scale enterprise. 43 of the entrepreneurs had 40 – 49 employees, indicating it to be a small-scale enterprise, while 8 entrepreneurs, classified as medium-scale enterprises, have about 50-199 employees. This indicated that micro-scale enterprises dominated the SMEs scheme.

In terms of business assets, it was observed from the table that about 338(84.9%) of the enterprise assets were worth less than five (5) million naira, while 58(14.6%) of the enterprises owned assets worth between five (5) and fifty (50) million naira. 2(0.5%) of the enterprises possessed assets worth between fifty-one (51) and five hundred (500) million naira. This also corroborated that micro-scale enterprises dominated the categories of SME beneficiaries of the Development Bank credit facilities.

Table 3. Distribution of respondents by size of enterprise in terms of number of employees and business asset

	Numbers of employees	Frequency	%	Valid %	Cumulative %
Valid	50-199 employees (medium-scale enterprise)	8	2.1	2.1	2.0
	40-49 employees (small-scale enterprise)	43	10.8	10.8	12.8
	1-10 employees (micro enterprise)	347	87.2	87.2	100.0
	Total	398	100.0	100.0	
	Business asset	**Frequency**	**%**	**Valid %**	**Cumulative %**
Valid	N51m - N500m	2	0.5	0.5	0.5

	(medium-scale enterprise)				
	N5m - N50m (small-scale enterprise)	58	14.6	14.6	15.1
	less than N5m (micro enterprise)	338	84.9	84.9	100.0
	Total	398	100.0	100.0	

Source: authors' computation, 2023.

Table 4 illustrates the number of respondents (entrepreneurs) who received a loan. It was observed that only 4, representing 1.0% of the respondents, received between N51,000,000 and above, while 6, representing 1.5% of the respondents, received between N11,000,000 and N50,000,000. 55(13.8%) of the respondents received between N1, 100,000 and N10, 000,000 loan while 38(9.5%) of the respondents received between N501, 000 and N1, 000,000. The majority, 160(40.2%) of the respondents, were documented to have received N101,000 and N500,000 as a loan. Next to the group is the 135(33.9%) respondents who received the least amount of between N1,000 to N100,000. Given the above statistics, the volume of credit facilities received by business owners might not be sufficient to drive the desired growth for their businesses as the majority of the beneficiaries received not more than N 500,000.

Table 4. Distribution of respondents by the amount of loan received

		Frequency	%	Valid %	Cumulative %
Valid	N51,000,000 and above	4	1.0	1.0	1.0
	N11,000,000 - N50,000,000	6	1.5	1.5	2.5
	N1,100,000 - N10,000,000	55	13.8	13.8	16.3
	N501,000 - N1,000,000	38	9.5	9.5	25.9
	N101,000 - N500,000	160	40.2	40.2	66.1
	N1,000 - N100,000	135	33.9	33.9	100.0
	Total	398	100.0	100.0	

Source: authors' computation, 2023.

From Table 5, the majority of the respondents, about 149 (37.4%), paid between 1-5% on the loan amount received as interest. It was also observed that 131 (32.9%) respondents paid between 6-10% interest rate on the amount borrowed. It was seen from the table that 34 (8.5%) of the respondents paid between 11- 15% interest on loans given to them as interest rate while 36 (9.0%) of the respondents paid between 16 -20% interest on the amount borrowed. Only 15 (3.8%) of the respondents paid between 21-25% interest on the amount borrowed, while 33 (8.3%) paid 26% and above as interest rate on the amount borrowed. This shows that the interest rate paid by the beneficiaries of this loan is relatively low. By implication, the entrepreneur's profit will be less affected, given the relatively low-interest rate.

Table 5. Distribution of respondents by the interest rate at which the loan was given

		Frequency	%	Valid %	Cumulative %
Valid	26% and above	33	8.3	8.3	8.3
	21 – 25%	15	3.8	3.8	12.1
	16 – 20%	36	9.0	9.0	21.1
	11 – 15 %	34	8.5	8.5	29.6
	6 – 10 %	131	32.9	32.9	62.6
	1 – 5 %	149	37.4	37.4	100.0
	Total	398	100.0	100.0	

Source: authors' computation, 2023.

To determine the business sales changes since the respondents (entrepreneurs) collected loans, it was observed that about 331(83.2%) of the respondents agreed that there had been growth in sales since they collected loans. On the other hand, 67(16.8%) of the respondents maintained that there was no growth in sales since the collection of loans. This denotes that the credit facility they benefited from has contributed to the growth of sales of SMEs, as documented by 83.2% of the entire population.

The distribution of respondents in terms of increased profit after the collection of loans. It was recorded that about 267(67.1%) of the respondents upheld that the profit of their business witnessed increases after the collection of credit. In comparison, 131(32.9%) of the

respondents maintained that there was no increase in profit after the collection of loans. Table 6 shows the distribution of respondents in terms of increase in sales and profit of their business since collection of loans.

Table 6. Distribution of respondents in terms of increase in sales and profit of their business since collection of loans

Sales growth after loan		Frequency	%	Valid %	Cumulative %
Valid	No	67	16.8	16.8	16.8
	Yes	331	83.2	83.2	100.0
	Total	398	100.0	100.0	
Valid	No	131	32.9	32.9	32.9
	Yes	267	67.1	67.1	100.0
	Total	398	100.0	100.0	

Source: authors' computation, 2023.

4.2. Impact of DBCF on the Growth of SMEs

From the distribution of respondents with regards to ownership of business, gender and age, size of the enterprise in terms of numbers of employees and business asset, amount of loans received, interest rate at which the loan was received and sales and profit made, below is table 7 which shows Binary Logistic Regression Analysis indicating the impact of DBCF on the growth of SMEs.

Table 7. Binary logistic regression analysis of the impact of DBCF on the growth of SMEs*

	β	SE	Wald Stat.	Exp.(β) OR	Sig.(P-value)	
Constant	-6.637		2.007	10.938	0.001	0.001
AGE	0.372		0.181	4.243	1.451	0.039
GENDER	0.381		0.311	1.504	1.464	0.220
BIZSIZE	0.527		0.298	3.128	1.694	0.077
AOLR	-0.819		0.224	13.395	0.441	0.000
IROL	0.199		0.098	4.100	1.221	0.043
HPIAL	0.680		0.370	4.901	1.974	0.027

Source: authors' computation, 2023.

*__Summary Stat.__-2Loglikelihood (-2LL) =295.83, X2=64.955, df=10, p<0.001, Nagelkerke R2=.253 (25.3%), Classification accuracy = 83.2%, Hosmer and Lemeshow Test (X2) =3.822, p-value =0.873

The estimated equation represents the sales growth model, which shows the relationship between small and medium enterprise growth measured by the sales growth and DBCF. It was observed from the model that there is a positive relationship between the amounts of credit requested (ACLR) with β = 0.765 and the sales growth of the SMEs. This denotes the probability of a unit change in the amount of loan requested by the entrepreneur to bring about a 0.765 change in the logit growth of sales of the entrepreneur while holding other variables constant. It is statistically significant at a 5% level given the computed Wald Stat. of 13.486 with p-value= 0.001, which is less than 0.05. The antilog of the parameter (β) of (ACLR) is computed as the Exp (β) = 2.148 or as the odds ratio (OR) (1.148) calculated as 1-Exp(β) = 1-2.148. The OR indicated that a unit change in β increased the logit of SME growth by the coefficient β.

The coefficient, β = -0.819 of the variable AOLR, which represented the actual amount of loan received, was found to hurt the SME's growth. It revealed that a unit change in the amount of loan received led to an about 0.819 unit decline in the growth of the SMEs at a 5% level of significance, given the Wald Stat.=13.395, p–value = 0.001. The Exp (β) = 0.441 with odds ratio (OR) = 0.551. This is contrary to the findings of Ezeaku, Anidiobu, and Okolie (2017) but in agreement with the studies of Babajide (2011). This inverse relationship between the loan received and growth in sales can be attributed to various factors ranging from individual prudential style of management of their businesses, prevailing business cycle, the general enabling business environment, monetary policy such as interest rate on lending and amount of taxes paid or that the size of the loan is too small to bring about positive change in growth of the business as mentioned by Babajide (2011). All the mentioned factors could affect the growth of a firm either positively or negatively.

The coefficient of the interest rate on lending (IROL) β = 0.199(19.9%) with Wald Stat. =4.100 and p-value =0.043 indicated a positive effect of interest rate on the growth of SMEs. This implied that a unit change in the interest rate level on borrowing brought about a 19.9%

variation in the logit growth of SMEs while holding constant other variables. It is statistically significant at a 5% level. The antilog of the parameter (β) calculated as the Exp (β) = 1.221 given the odds ratio (OR) =0.22(22.0%), denoting that a unit change in β increased the value of the logit (SMEs growth) by the value of the logit coefficient β. This implies that although the a priori interest rate is expected to hurt the growth of SMEs, the study findings showed otherwise, which is contrary to the findings of Ezeaku, Anidiobu, and Okolie (2017). By implication, this means that besides interest rate, there are other sales growth determinants such as support and service training the entrepreneur must have benefitted from before credit was given, which may have imbued in the entrepreneur the managerial skills and the ethic of managing businesses loans thereby neutralizing the negative effect of interest rate. The profit level made by a business may also mask the negative impact of interest rate, primarily if found in this model as the explanatory variable and exhibited a high positive impact on the SMEs' growth. Again, the frequency with which loans are paid will save the entrepreneur from experiencing the negative effect of the compounding interest payment.

To measure the impact of profit, the predictor variable (HPIAL) with its parameter estimates (β) = 0.680(68%) indicates a positive impact on the growth of the sales of SMEs. This means by magnitude that a unit change in the profit made by the SMEs while holding other variables in the model constant led to about 68% variation in the growth of sales of the SMEs. It is statistically found to be significant at a 5% level, as detected by the computed value of the Wald Stat. = 4.901 with p-value = 0.027, <0.05. The Exp (β) = 1.974 gave the odds ratio (OR) = 0.974, implying that SMEs making a profit are more likely to experience growth in sales than an entrepreneur with no profit; more specifically, it means that SMEs making a profit are 0.9 times more likely to experience sales growth than SMEs that are not making a profit. This denotes the significance of profit as a determinant of sales growth of small and medium-scale enterprises. The variables GENDER and BISSIZE (business size) positively impact the growth of SMEs, but they are not statistically significant. However, the variable AGE (age of the entrepreneur) exhibited a positive relationship with SME growth; this can result from experiences that might have been gathered over the years due to age.

The chi-square (X2) value of 64.955, df=10, P< 0.05 revealed that all the variables have a significant effect on the level of growth of the SMEs. The value of the -2loglikelihood=295.830 means that the model fits the data better. The Hosmer-Lemeshow test (X2) = 3,822, df=8, p-value =0.873, which is greater than 0.05, and the model's fit was also confirmed. The Pseudo R2 Nagelkarke = 0.253(25.3%). The Pseudo R2 in logistic regression is not highly emphasized because it usually comes out poor. Therefore, signs and significance of the coefficients are focused on (Gujarat, 2004:605-6).

Based on the discussion above, the study finds that the relationship between SMEs and DBCFs loans is positively related like the findings of Babajide (2011) that Microfinance Credit has positive impact on SMEs in Nigeria and the findings of Oteniya and Lawal (2021). It is also the finding of the study that there is a serious link between DBCFs loans and the growth of SMEs like the finding of Adeleke, Eze and Majekodunmi (2019) which found that SMEs are significantly impacted by loans from DBCFs.

5. Conclusions

Based on the summary of the significant findings, the study concludes that DBCF significantly and positively impacts the performances of small and medium-scale enterprises (SMEs) in Nigeria. Among the areas where DBCF has impacted the performance of SMEs is the growth of the SMEs, employment generation of MSMEs and financial liquidity of SMEs, which are vital to the overall performance of the economy. However, it was found that DBCF credit financing did not significantly impact the profitability of SMEs. The amount of loan invested, impact of support and training, and frequency of repayment of loan received were documented to be the main variables that impacted the growth of the SMEs. Regarding the SMEs' employment generation and financial assets, support and service training received before the loan and the proportion of loans utilized were the main variables that impacted them. Meanwhile, the average monthly tax paid after a loan was discovered to have a negative and significant impact on SMEs' profit.

It was established by the study that DBCF credit financing does have a significant impact on the growth of SMEs in Nigeria. Given this, the study recommends more credit availability by BDN and financing partners. The volume of money released as credit to MSMEs should be increased, and more SMEs should benefit from the credit scheme. Likewise, efforts should be geared towards ensuring that the amount of credit requested by SMEs is available to them

because of its significant impact on the growth of SMEs. Support and services training provided before a loan should be made mandatory by DBCF. It should be one of the criteria for accessing the credit facility because of its significant impact in explaining the growth of SMEs in terms of sales.

The study concluded that development credit financing does not significantly impact the level of profit of SMEs in Nigeria. This might result from the burden of loan repayment and tax payment. Based on this, the study recommends that tax reduction or tax holiday to the beneficiaries of this credit financing until the full repayment of their loan, as it was discovered that the average amount of tax paid by SMEs has a negative and significant impact on the profit of SMEs

Also, the study concluded that DBCF credit financing significantly impacts the financial performance (liquidity) of SMEs in Nigeria through the proportion of loans invested by the SME operators and support and service training received before the loan. This further corroborates the need to intensify training before loan disbursement and adequately monitor the credit to ensure it is well utilized.

References

Adelekan, S. A., Eze, B. U., & Majekodunmi, S. A. (2019). Bank loans and small medium enterprises (SMEs) performance in Lagos, Nigeria. *Ilorin Journal of Human Resource Management, 3*(1), 52-61.

Agyeman, B., Quarshie, D., & Telari Bonn, J. (2021). Does Access to Credit Impact the Performance of Small and Medium Enterprises? *Global Scientific Journal, 9*(11), 2494–2512.

Aluko, O.O. (2008). Small and Medium Scale Enterprises (SMEs) as engines of industrial take- off in Nigeria: Implication for the Nigeria Economic Empowerment and Development Strategy (NEEDS). *Nigerian Journal of tropical geography, 2*(1).

Ayunkun, P., & Eweke, G. O. (2020). Banks credit, macroeconomic dynamics and the performance of small and medium scale enterprises in Nigeria: a non-linear ARDL approach. *European Journal of Business and Management Research, 5*(1), 1-7. http://dx.doi.org/10.24018/ejbmr.2020.5.1.129

Babajide, A. A. (2011). Effects of microfinance on micro and small enterprises (MSEs) in southwest Nigeria: Doctoral dissertation. Ota: Covenant University.

Bruck, N. (1998). The role of a development bank in the twenty-first century. *Journal of Emerging Markets, 3*, 39-67.

Bubou, G. M., Siyanbola, W. O., Ekperiware, M. C., & Gumus, S. (2014). Science and technology entrepreneurship for economic development in Africa (SEEDA). *International Journal of Scientific and Engineering Research, 5*(3), 921-927.

Cameron, R. (1961). France and the economic development of Europe, 1800-1914. Princeton University Press: Princeton.

Ezeaku, H. C., Anidiobu, G. A., & Okolie, P. I. P. (2017). SMEs financing and its effect on manufacturing sector growth in Nigeria: An empirical assessment. *European Journal of Economic and Financial Research, 2*(2), 51 – 63.

Imisi, I. J., Okunlola, J. O., & Ayedun, T. (2021). The effects of credit risk management on SMEs performance in Ondo State. *Journal of Business and Management, 23*(6), 01-09.

Kenton, W. (2023), Classical Growth Theory: Meaning and History. https://www.investopedia.com/terms/c/classical-growth-theory.asp

Khan, B. (2020). Microfinance banks and its impacts on small and medium scale enterprises in Nigeria. *World Scientific News, 141*, 131-151.

Lazzarini, S. G., Musacchio, A., Bandeira-de-Mello, R., & Rosilene, M. (2015). What do development banks do? Evidence from BNDES, 2002–09. *World Development, Elsevier, 66*(C), 237-253.

Magaji, S. & Saleh, S. A. (2010). The Role of Small-Scale Industries in the Economic Development of Nigeria. *Abuja Journal of Banking and Finance, 2*(2), 11

Magaji, S. (2004). *Introduction to Project Evaluation.* Sanitex Press Abuja.

Magaji, S. Musa, I., & Dogo, S. S. (2023). Analysis of the Impact of Banking Sector Credit on the Real Sector in Nigeria. *International Journal of Management and Business Applied, 2*(1) 12-20.

Magaji, S., & Aliyu, C. U. (2007). Micro-credit and Women Empowerment in Bauchi State: The Role of Community Banking. *Issues in Economics, 2(*1), 162-168

Magaji, S., Muhammed, I.R. and Abubakar, I.D. (2015). Analyzing the Nexus Between SMEs and Economic Growth in Nigeria. *Abuja Journal of Business and Management, 1*(2), 55-67

Magaji, S., Musa, I. & Abdullahi, A. I. (2024). Impact of Small and Medium Enterprises on Women Empowerment in Nigeria. *British Journal of Management and Marketing Studies, 7*(2), 83-98. DOI: 10.52589/BJMMS-YUD5Z0I0

Magaji, S., Musa, I., Ahmad, A. I. & Eke, C. I. (2024), Liking Demonetization of Small and Medium Enterprises (SMEs) Output. *International Journal of Research Publication and Reviews, 5*(3), 7487-7496

Motilewa, B. D., Ogbari, M., & Aka, D. O. (2015). A review of the impacts of SMEs as social agents of economic liberation in developing economies. *International Review of Management and Business Research, 4*(3), 903–914.

Moussa, F. (2020). Impact of microfinance loans on the performance of SMEs: the case of Lebanon. *Verslas: Teorija ir praktika / Business: Theory and Practice, 21*(2), 769–779. https://doi.org/10.3846/btp.2020.11110

Musa, I., Magaji, S., & Salisu, A. (2023). The Relationship between Financial Inclusion and Economic Growth: Evidence from ARDL Modeling. *FORCE: Focus on Research in Contemporary Economics, 3*(2), 395-413. https://www.forcejournal.org/index.php/force/article/view/79

Musa, I., Magaji, S., Eke, C. I., & Yakeen, O. A.-M. (2022). Poverty and Its Intractability: Causes and Consequences. *Inclusive Society and Sustainability Studies, 2*(2), 48–58. https://doi.org/10.31098/issues.v2i2.1218

Ogboru, L. P. (2007). An evaluation of funding arrangement for Small and Medium Scale Enterprises (SMEs) in Nigeria. (PhD Thesis). Department of Business and Management Studies, St Clements University, British, West Indies.

Oteniya, P.O., & Lawal, N. A. (2021). Trade credit impact on small and medium enterprises in Nigeria. *European Journal of Accounting, Auditing and Finance Research, 9*(1), 85-96. https://www.eajournals.org/wp-content/uploads/Trade-Credit-Impact-on-Small-and-Medium-Enterprises-in-Nigeria.pdf

Peter, F. O., Adegbuyi, O., Olokundun, M. A., Peter, A. O., Amaihian, A. B., & Ibidunni, S. A. (2018). Government financial support and financial performance of SMEs. *Academy of Strategic Management Journal, 17*(3), 1-10. https://tudr.org/id/eprint/116/1/Government-financial-support-and-financial-performance-1939-6104-17-3-207.pdf

Peterhoff, D., Romeo, J., & Calvey, P. (2014). *Towards better capital markets solutions for SME financing.* Oliver Wyman, New York.

Tebaldi, E., & Elmslie, B. (2008). Institutions, Innovation and Economic Growth. *Journal of Economic Development, 33*(2), 27-53. DOI: 10.35866/caujed.2008.33.2.002

World Bank. (2014). Facilitating SME financing through improved credit reporting. https://www.worldbank.org/en/topic/financialsector/publication/facilitating-sme-financing-through-improved-credit-reporting

World Bank. (2021). Small and medium enterprises (SMEs) finance. https://www.worldbank.org/en/topic/smefinance

Zidana, R. (2015). Exploring alternative sources of financing small and medium enterprises (SMEs) in Malawi: Lessons from elsewhere. *Afro-Asian Journal of Social Sciences, 6*(4), 139-154. DOI: 10.2139/ssrn.2680534