COMMERCIAL BANK CREDIT TO MICRO, SMALL, AND MEDIUM ENTERPRISES (MSMES) AND ECONOMIC GROWTH IN NIGERIA

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ABSTRACT
The study assessed commercial bank credit to Micro, Small, and Medium Enterprises (MSMEs) and economic growth in Nigeria. Particularly, it empirically assessed the causal relationship between commercial bank credit to this category of entrepreneurs and economic growth in the country spanning the period of 1992 to 2020. To do this, the study used the Toda-Yamamoto (T-Y) procedure. Using gross national product as proxy for economic growth and total commercial bank credit to MSMEs, findings from the T-Y estimation revealed that there was no causal relationship between commercial bank credit to MSMEs and economic growth in Nigeria for the period under analysis. It concludes that commercial bank credit to these entrepreneurs was inadequate to spur growth. To reverse this, the study recommends that commercial banks should extend more funds to MSMEs, while also providing them with long-term and sound credit risk management and business development services to boost their growth enhancing effects on the economy.
Keywords: Commercial Banks, MSMEs financing, Economic growth, Toda-Yamamoto.
JEL Classification: G21, G32, L26, M21, 040.

1. INTRODUCTION

In developing countriesMicro, Small and Medium Enterprises (MSMEs) are at the fore front of entrepreneurial development (Mupotola, 2021; Musa, 2021). MSMEs play key roles in transition and developing countries. These category of entrepreneurs typically account for more than 90% of all firms outside the white-collar jobs sector, constituting a major source of employment and generates significant domestic and export earnings (Kanu & Nwadiubu, 2021). In Nigeria 27% of the country's trade balance comes from MSMEs, but more importantly they these businesses employ 60 million Nigerians (Aluko, 2018). Furthermore, Aluko (2018) asserted that without MSMEs, the unemployment rate would soar to as much as 50%, which could result in chaos in the country.

Commercial banks have a long and successful history of assisting the private sector (Nnamdi et al., 2021), particularly MSMEs. The bank's actions help to create a favorable commercial and operational environment, encourage further entrepreneurial development through technical assistance and business development services, and offer trade credit via innovative financing products which have spurred economic growth over the years (Ozioko & Enya, 2021; Olaoye, Adedeji, Ayeni-Agbaje, 2018).

Credits plays a significant role in competitive economies (Obinna, 2020). Consequently, Adewole and Aderemi (2021) and have argued that when money is created in combination with interest-bearing debt, a growth imperative is necessarily created, particularly, the charging of interest on debt is itself an underlying driver for economic growth. Providing adequate finance for MSMEs is therefore critical since they are regarded as the motor of any economy's development because they account for the majority of business operations in a developing economy like Nigeria. Because MSMEs are characterized by energy, creativity, and efficiency, and their small size allows for a faster decision-making process, most economies, particularly those of emerging nations, march on their shoulders.

The advantages of MSMEs to any economy are obvious. These category of entrepreneurs help in the economy in terms of output, i.e., providing goods and services; creation of jobs at relatively low capital cost, especially in the fast-growing service sector; provide a vehicle for reducing income disparities; develop a pool of skilled and semi-skilled workers as a basis for future industrial expansion; improve forward and backward linkages between economically, socially and geographically diverse sectors of the economy; Provide opportunities for developing and adapting appropriate technological approaches; offer an excellent breeding ground for entrepreneurial and managerial talent, the critical shortage of which is often a great handicap to economic growth, among others (Invoice, 2021).

MSME's in Nigeria over the last five years account for 48 percent of the country's GDP, 96 percent of enterprises, and 84 percent of jobs- they account for over half of all industrial jobs and virtually all of the manufacturing sector in terms of number of businesses, with a total population of around 17.4 million (PricewaterhouseCoopers, 2021; Small and Medium Enterprises Development Agency of Nigeria. (2021).

Inadequate access to finance is a key constraint to SME growth, it is the second most cited obstacle facing MSMEs to grow their businesses in emerging markets and developing countries (Balarabe (2021; World Bank, 2021; Ayansola & Jennifer, 2017). Recognizing the importance of funding to MSME growth, the Federal Government of Nigeria through the Central Bank of Nigeria (CBN) launched the MSMEs Development Fund in 2013 with a share capital of N220 billion. The Fund was established in recognition of the significant contributions of the MSME sub-sector to the economy and the existing huge financing gap. In particular, substantial amounts of the fund, has been given to Participating Financial Institutions (PFIs) which are predominantly commercial banks for onward lending to MSMEs at a maximum interest rate of 9% per annum (CBN, 2021).

Despite these interventions, the cost of funds still constitutes a major source of problem for MSME, and this have significantly limited their competitiveness, survival, and their growth enhancing effects on the economy (PWC, 2021). In addition, the MSMEs finance led growth debate in the literature have remained inconclusive. While several studies such as that of Onyeiwu, Muoneke and Nkoyo (2021), and Akinadewo (2020) affirm the finance growth enhancing effect on the economy, studies such as that of Kanu and Nwadiubu (2021), and Olaoye et al. (2018) have disputed this position. This study therefore provides empirical evidence as to whether commercial bank credit to MSMEs causes economic growth in Nigeria.

2. LITERATURE REVIEW
Theoretical Literature: Schumpeterian Supply-Leading Theory
Schumpeter (1934) introduced the supply-leading theory or the finance-led growth hypothesis. The theory establishes the link between finance and economic growth. A well-functioning financial sector, according to Schumpeter (1934), is required to support expansion in the real sector, which leads to economic growth. To put it another way, how well the financial sector is grown or deepened determines economic growth. As the financial industry matures, the supply of financial services expands. The central argument underlying supply-leading hypothesis is that financial deepening is a determining cause of economic growth. It claims that the development of the financial sector leads to optimal resource allocation. According to the supply-leading hypothesis, causality flows from finance to economic growth without any feedback from economic growth. A well-developed financial sector is a pre-condition for economic growth. The supply-led growth model assumes that financial sector development granger causes economic growth.

Schumpeter (1934) argued that in the long-run, efficient allocation of savings through the identification and extension of credit to entrepreneurs with the best chances of successfully implementing innovative products and manufacturing processes accelerates output growth. Financial intermediation, according to Schumpeter, is a useful tool for increasing the economy's productive capacity. This theory was later supported by Goldsmith (1969), Shaw (1973), and McKinnon (1973), who theorized that finance is a very important and primary requirement for both short- and long-term economic growth in their works. Financial institutions facilitate the exchange of goods and services by assisting in the mobilization of savings. They also gather and process information about investors and investment projects in order to facilitate efficient fund allocation, monitor investments, and provide corporate governance after funds have been allocated, and assist in risk diversification, transformation, and management (Lioudis, 2021). When financial institutions and markets function well, they allow all market participants to benefit from the best investments by channeling funds to their most productive uses.

The Schumpeterian Supply-Leading theory of financial intermediation served as the theoretical basis for this research. Here, financial intermediation (through efficient credit delivery to entrepreneurs), spurs the economy's productive capacity. Financial sector development and deepening is reflected in this study by the amount of credit delivered to MSME's within the country. The transmission to economic growth follows from the fact that that when money is created in combination with interest-bearing debt, a growth imperative is necessarily created, particularly, the charging of interest on debt is itself an underlying driver for economic growth.

Empirical Literature
The study reviewed several studies that assessed the relationship between formal credit on MSME's and the economy. Kanu and Nwadiubu (2021) assessed the impact of commercial bank loans on the performance of small and medium scale enterprises in Nigeria covering the period of 1990 to 2019. The study used the Multiple regression analysis on an annual time series dataset of output of small and medium scale enterprises (SMEs), commercial bank loans to SMEs, average capacity utilization, unemployment rate, interest rate, inflation and exchange rate. The empirical result of the study indicated that, there exists an inverse relationship (though not statistically significant) between the amount of commercial bank loans made available to SMEs and the output of SMEs in Nigeria.

In a similar study, Olaoye et al. (2018) Reached the same conclusion as Kanu and Nwadiubu (2021). However, their study was carried out using descriptive analysis, correlation analysis, Multiple regression analysis, and Granger causality test. Variables used in the analyses were GDP, commercial bank loans to SMEs, average commercial bank lending rate, and inflation rate. Findings revealed that commercial bank loans to SMEs had a negative and insignificant impact on GDP. Average commercial bank lending rate to SMEs had a negative and insignificant impact on GDP. Meanwhile, the study revealed that inflation rate exerted an insignificant positive impact on GDP. The result also revealed that there is no causal relationship between explanatory variables and GDP in the country.

Adewole and Aderemi (2021) investigated the relationship between SMEs financing and sustainable economic growth between 1992 and 2019 in Nigeria using annual time series data. The study used Multiple regression analysis and the Granger causality procedure to carry out its empirical analysis. Data used for the empirical analysis are GDP growth rate, commercial bank loans to SMEs, commercial bank total credit to the private sector, broad money supply, and gross fixed capital formation. Empirical findings revealed that SMEs and GDP growth rate possess a positive and significant relationship. Gross fixed capital formation and commercial bank total credit to private sector showed an insignificant positive relationship with GDP growth rate. The study further found a unidirectional causal flow from

broad money supply to gross fixed capital formation, in addition, a one-way feedback runs from GDP growth rate to commercial banks loans to SMEs.

Also, Onyeiwu, et al. (2021) examined the extent to which SMEs financing influenced economic growth in Nigeria using annual time-series data spanning the period from 1999 to 2018. Using the Multiple regression technique, the variable used in the empirical estimation are aggregate of SMEs contribution to GDP, gross capital formation, commercial bank credit to SMEs, lending rate, electricity distribution. Empirical finding revealed that credit to SMEs had a positive and statistically significant impact on growth, but it's impact was however weak.

Akinadewo (2020) examined the nexus between microfinance banks and the growth of MSMEs in Nigeria using a quasi-experimental research design, and adopting a self-administered questionnaire. The respondents comprise the microfinance banks' management and staff and MSMEs in Lagos State, which is the commercial hub of Nigeria. The targeted population of this study was 250. The study tested two hypotheses using logit regression analysis. The findings revealed that a significant positive relationship exists between microfinance banks, proxied by Small Scale Financial Services (SSFS), Financial Sustainability (FST), Absence of Assets-based Collateral (AAC), and Advisory Services (ADS) and the growth of MSMEs in Nigeria. This implies that any upward movement in the services of microfinance banks will enhance the growth of MSMEs in the country.

In a slightly different study, Nnabu et al. (2017) assessed how commercial bank credit to SME's lowered the rate of unemployment within the Nigerian economy. Using an annual time series dataset spanning the period of 1992 to 2014, the study employed a Vector Error Correction Model (VECM) on an annual time series dataset spanning the period of 1992 to 2014. Variables used in carrying out the empirical analysis were unemployment rate, commercial bank credit to SMEs, prime interest rate, and personal savings. The VECM result showed that bank credit to SMEs and personal savings has no impact on unemployment reduction in Nigeria. Similarly, it revealed that interest rate caused unemployment in the country.

Ovat (2016) in a Nigerian based study examined the role played by commercial banks' credit in facilitating the growth of SMEs in Nigeria. The study used an Error Correction Model (ECM) on an annual time series dataset of SMEs output, commercial Banks' credit to SMEs, lending rate, inflation rate, exchange rate, bank density, which spanned the period of 1990 to 2014. The empirical findings revealed that commercial banks' credit does not contributed significantly to the growth of Small and Medium Scale Enterprises in Nigeria.

Similarly, using annual time series data, Iloh and Chioke (2015) examined the relationship between commercial bank credits indicators and availability of credit facility to SMEs and the Nigerian economy covering the period of 1980 to 2010. The study used a generalized least squares estimation technique on the variables of SMEs output, commercial banks' credit to SMEs, exchange rate of naira, and the lending rate. The result of the analysis showed that commercial banks' credit to SMEs have a significant effect on Nigeria's economic growth by positively affecting GDP, implying that SMEs financing is a great catalyst and a driving force for economic growth in Nigeria.

Ayuba and Zubairu (2015) examind the impact of banking sector credit on the growth of SMEs in Nigeria. The study used Multiple regression analysis on an annual time series dataset spanning 1985 to 2010. The dependent variable for the study was the growth rate of SME's while the explanatory variables were banking sector credit, trade debt, exchange rate and Inflation rate. Empirical findings from the study revealed that banking sector credit has a significant impact on the growth of SMEs in Nigeria.

Additionally, Oke and Aluko (2015) examined the impact of commercial banks in financing small and medium scale enterprises (SMEs) in Nigeria between 2002 and 2012. The study used a sample of ten commercial banks in the country. The empirical analysis was carried out using Panel regression analysis. Variables used in the analysis were SMEs finance, commercial bank credit to SMEs, commercial bank equity, and ratio of commercial bank loan to SME to total credit in the economy. The empirical finding revealed that commercial bank has significant impact on SMEs' financing in Nigeria.

With reference to previous literatures, this study represents a recent attempt that examines commercial bank's credit to MSMEs and economic growth in Nigeria. Additionally, unlike previous studies on a related topic, this study used the gross national product and maximum lending rate (a better proxy to capture the cost of credit) in its model selection. Additionally, it employed the superior Toda Yamamoto (T-Y) procedure to carry out its causal analysis.

3. METHODOLOGY
Data and Method of Analysis
For the study, secondary data was used. It made use of time series data, particularly annual data from 1992 to 2020. The data came from the CBN's annual statistical bulletin for 2020 and the World Bank's 2020 statistical data base. The choice of the base and terminal years was influenced by the availability of data. The Toda-Yamamoto (T-Y) procedure was used to determine the causal relationship between commercial bank credit to MSMEs and economic growth in Nigeria.

The justification for using the T-Y approach, according to Toda and Yamamoto (1995), stems from the fact that it aids in overcoming the problem of asymptotic critical values when causality tests are performed in the presence of non-stationarity or no co-integration. As a result, the T-Y test reduces the risks associated with an incorrectly identified integration order. Similarly, the method can be used with any arbitrary levels of integration for the variables.

Model Specification
Financial sector development and deepening (following the Schumpeterian Supply-Leading theory) is captured in this study by the amount of credit delivered to MSME's within the country. The transmission to economic growth follows from the fact that that when money is created in combination with interest-bearing debt, a growth imperative is necessarily created, particularly, the charging of interest on debt is itself an underlying driver for economic growth, as it spurs competitiveness among firms.

The study adapted the work of Olaoye et al. (2018). As such, it used the variables of economic growth proxied by gross national product, commercial bank credit to MSMEs, and interest rate (using maximum) lending rate to carry out its analysis. Consequently, the causal model specification for the T-Y procedure are given in Equations [1] and [2];

$$LnGNP_t = \alpha_0 + \sum_{i=1}^{k}\varphi_{1i}LnGNP_{t-1} + \sum_{j=k+1}^{k+d\max}\varphi_{2j}LnGNP_{t-j} + \sum_{i=1}^{k}\lambda_{1i}LnCCR_{t-1} + \sum_{j=k+1}^{k+d\max}\lambda_{2j}LnCCR_{t-j}$$

$$+ \sum_{i=1}^{k}\eta_{1j}LnINT_{t-j} + \sum_{j=k+1}^{k+d\max}\eta_{2j}LnINT_{t-j} + \varepsilon_{1t} \qquad [1]$$

$$LnCCR_t = \beta_0 + \sum_{i=1}^{k}\phi_{1i}LnCCR_{t-1} + \sum_{j=k+1}^{k+d\max}\phi_{2j}LnCCR_{t-j} + \sum_{i=1}^{k}\varpi_{1i}LnGNP_{t-1} + \sum_{j=k+1}^{k+d\max}\varpi_{2j}LnGNP_{t-j}$$

$$+ \sum_{i=1}^{k}\pi_{1j}LnINT_{t-j} + \sum_{j=k+1}^{k+d\max}\pi_{2j}LnINT_{t-j} + \varepsilon_{1t} \qquad [2]$$

$$LnINT_t = \delta_0 + \sum_{i=1}^{k} \psi_{1i} LnINT_{t-1} + \sum_{j=k+1}^{k+d\,max} \psi_{2j} LnINT_{t-j} + \sum_{i=1}^{k} v_{1i} LnGNP_{t-1} + \sum_{j=k+1}^{k+d\,max} v_{2j} LnGNP_{t-j}$$

$$+ \sum_{i=1}^{k} \theta_{1j} LnCCR_{t-j} + \sum_{j=k+1}^{k+d\,max} \theta_{2j} LnCCR_{t-j} + \varepsilon_{1t} \qquad\qquad [3]$$

where, α_0, β_0 and δ_0 are the intercepts; $\varphi, \lambda, \eta, \phi, \varpi, \pi, \psi, v$ and θ are the parameters of the model; ε_t represents the residuals of the models; k denotes the optimal lag length; *dmax* is the maximum order of integration suspected to occur in the system; *LnGNP* represents the natural log of gross national product (this is an estimate of the total worth of all final products and services produced by the means of production owned by a country's citizens in a given period), *LnCCR* stands for the natural log of commercial bank credit to MSMEs (is a pre-approved on-demand lending credit facility provided by commercial banks to MSME'S), while *LnINT* represents the interest rate (this represents the rate at which banks grant credit to customers who are thought to be high-risk).

Estimation Procedure
The descriptive statistics of the data sets are presented first in the empirical analysis for the investigation. It provides a historical backdrop for the behavior of the data distribution and outlines the basic statistical aspects of the data under examination.

The implementation of the T-Y procedure follows these 3 stages; The first step is the determination of the maximum order of integration- This step involves the testing of the time series to determine the maximum order of integration (*dmax*) of the variables in the system. This was done using the Augmented Dick Fuller (ADF) and the Kwaiatkowski, Phillips, Schmidt and Shin (KPSS) unit root tests. For the case of the ADF test, the null hypothesis is non-stationarity, while for the KPSS, the null hypothesis is that of stationarity.
The second step is the determination of the optimal lag length (k)- The k is always unknown and has to be obtained from the VAR estimation of the variables in their levels. In the econometric literature, a number of selection criteria have been proposed that can be used to determine the optimal lag order. The criteria considered in this study are the Akaike Information Criterion (AIC), the Schwarz Information Criterion (SIC), and the Hannan-Quinn Criterion (HQC).

The third step involves testing for causality- The causality test is done by using the Modified Wald procedure in the VAR system, where the optimal lag length is equal to $k+d\,max$. The Modified Wald test has an asymptotic chi-square distribution with k degrees of freedom in the limit when a $VAR(k+d\,max)$ is estimated. The causality between two variables can be described as unidirectional, bidirectional or no causality considering these decision rules; unidirectional causality occurs when either null hypothesis is rejected, bidirectional causality exists when both null are rejected, and no causality exists if neither null hypothesis is rejected.

For the residual diagnostic test of the study, the study carried out the VAR Residual Serial Correlation LM test to test for serial correlation and used the Inverse roots of AR characteristic polynomial to test for the stability of the model.

4. PRESENTATION & ANALYSIS OF RESULT
4.1. Descriptive Statistics
The descriptive statistics on Table 1 provides the basic statistical features of the data-set under consideration

Table 1: *Descriptive Statistics*

Statistics	GNP	CCR	INT
Mean	257933.4	36.96586	24.39862
Maximum	720988.4	123.9300	36.09000
Minimum	8487.448	10.75000	18.36000
Std. Dev.	233445.5	27.21253	4.493112
Skewness	0.592292	1.416323	0.713362
Kurtosis	1.974808	4.957983	2.767546
Jarque-Bera	2.965562	14.32791	2.524907
Probability	0.227006	0.000774	0.282959
Observation	29	29	29

Source: *Computed using E-views 10*

Following the mean values of each data, evidence of variations was observed in the data-set as shown by the difference between the minimum and maximum values of all three distributions. Furthermore, the skewness of the data-set indicated that slight deviations from the mean for all three variables were positively skewed. Both the skewness and kurtosis of the GNP and INT matched those of a normal distribution, this is further confirmed by the probability value of the Jarque-Bera statistics. Despite the fact that the Jaque-Bera statistics for CCR suggested a non-normally distributed distribution, the study proceeded with the T-Y technique because the multivariate framework does not necessarily require the normality assumption.

Unit Root Test
The study used the Augmented Dickey-Fuller (ADF) test and the Kwaiatkowski, Phillips, Schmidt, and Shin (KPSS) tests to see how sensitive the Toda Yamamoto (T-Y) procedure is to the order in which a data set is integrated. The null hypotheses for both procedures are mirror opposites, i.e., while the ADF tests the null hypothesis for the presence of unit root, the KPSS procedure tests the null hypothesis for the absence of unit root. Table 2 summarizes the results of both tests.

Table 2: *ADF & KPSS Unit Root Test Results*

Variable	ADF Stat.	Order	KPSS Stat.	Order
GNP	-5.182522 (-3.587527)	1(1)	0.026836 (0.146000)	1(2)
CCR	-5.182522 (-3.587527)	1(0)	0.103663 (0.146000)	1(0)
INT	-5.437403 (-3.587527)	1(1)	0.110527 (0.146000)	1(1)

Source: *Computed using E-views 10*

Figures in parenthesis represents the critical values at the 5% level.
The unit root test on Table 1 shows different orders of integration. A confirmatory analysis of both the ADF and the KPSS procedures showed that only CCR was stationary, following both the ADF and the KPSS test procedures. For *GNP*, while the ADF test indicted stationarity at 1st difference, the KPSS test on the other hand indicted stationarity at 2nd difference. On the other hand, *INT* showed that both the ADF and the KPSS tests were stationary at 1(1). To determine the maximum order of integration (*dmax*) of the variables in the system, the study adopted the KPSS procedure as a result of the fact that the ADF procedure is fragile to structural breaks in comparison to the KPSS procedure. Consequently, the *dmax* for the T-Y procedure in this study was 2.

The Lag Length Selection Test
The first step in carrying out the T-Y estimation based on the Augmented VAR procedure requires selecting an optimal lag length. Consequently, the optimal lag length required for the estimation of the T-Y procedure is carried out as presented on Table 3.

Table 3: *Optimal Lag Length Result*

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-475.7292	NA	3.98e+12	37.51763	38.09829	37.68484
1	-447.7763	40.85424*	9.57e+11*	36.05972*	37.07587*	36.35233*
2	-442.9939	5.886039	1.44e+12	36.38415	37.83580	36.80217

Source: *Computed using E-views 10*
* indicates lag order selected by the criterion
where LR: sequential modified LR test statistic (each test at 5% level), FPE: Final
prediction error, AIC: Akaike information criterion, SC: Schwarz information criterion,
HQ: Hannan-Quinn information criterion
Analysis of the selection criteria showed that majority of the test criteria chose 1 lag. As such, the study adopted 1 lag in carrying out the T-Y estimation.

Toda Yamamoto Result
The result of the T-Y causality tests is presented on Table 4.
Table 4: *Toda Yamamoto (T-Y) Test Result*

Null hypothesis	Chi-sq	df.	Prob.	Remark
LnCCR does not Granger Cause *LnGNP*				No
	0.005024	1	0.9435	Causality
LnGNP does not Granger Cause *LnCCR*				No
	0.798237	1	0.3716	Causality
LnINT does not Granger Cause *LnGNP*				No
	0.492082	1	0.4830	Causality
LnGNP does not Granger Cause *LnINT*				No
	2.167216	1	0.1410	Causality
LnINT does not Granger Cause *LnCRR*	4.096811	1	0.0430	Causality
LnCRR does not Granger Cause *LnINT*				No
	1.151816	1	0.2832	Causality

Source: *Computed using E-views 10*

The result of the T-Y test conducted at the 5% level indicates that only *LnINT* granger caused *LnCCR*. It showed that there was no causal relationship existing between commercial bank credit (*LnCCR*) and economic growth (*LnGNP*) in Nigeria for the period under analysis. The finance growth debate of MSMEs in Nigeria according to this finding points to the fact that commercial bank MSMEs financing is inadequate and is therefore unable to spur economic growth in the country.

Residual Diagnostic Test
To ensure model adequacy, the VAR residual serial correlation test was conducted.
Serial Correlation Test- The result of the VAR Residual Serial Correlation LM test is presented on Table 5.

Table 5: *VAR Residual Serial Correlation LM Test Result*
Null hypothesis: No serial correlation at lag h

Lag	LRE* stat	Df	Prob.	Rao F-stat	df	Prob.
1	13.07293	9	0.1593	1.567234	(9, 36.7)	0.1619
2	10.91593	9	0.2815	1.272266	(9, 36.7)	0.2845

Null hypothesis: No serial correlation at lags 1 to h

Lag	LRE* stat	Df	Prob.	Rao F-stat	df	Prob.
1	13.07293	9	0.1593	1.567234	(9, 36.7)	0.1619
2	16.51101	18	0.5569	0.909914	(18, 34.4)	0.5725

Source: *Computed using E-views 10*

The result of the VAR residual serial correlation LM test led to the acceptance of the null hypothesis considering the probability values of the lag which is greater than the 5% level. As such, the study concluded that the T-Y model was free from serial correlation.

4.5.2. Stability Test
Figure 1 shows the plot of the inverse roots of the AR characteristic polynomial used to test the model's stability. It shows the inverse roots of the AR characteristic polynomial graph, which have roots with a modulus of less than one and lie within the unit circle, showing that the model is stable and the conclusions obtained from it are also valid. As a result, the model meets the criteria of dynamic stability.
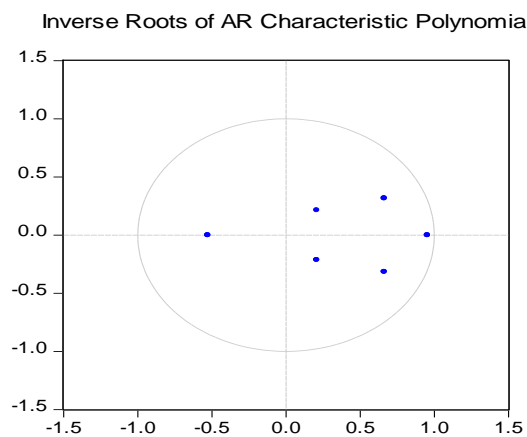

Figure 1: *AR Stability Graph*

5. CONCLUSION & RECOMMENDATION
Conclusion
In line with the finding of the Toda-Yamamoto (T-Y) procedure, the study concluded that there was no causal relationship between commercial bank credit to MSMEs and economic growth and vice versa in Nigeria. In line with studies such as Kanu and Nwadiubu (2021), Olaoye et al. (2018), and Ovat (2016) the result points to the fact that credit to these categories of entrepreneur was inadequate to spur growth. Commercial banks' apparent inability to provide adequate loans to these businesses translates to poor levels of contribution of MSMEs to the economy. In the face of inadequate finance, these businesses have been unable to bring effective growth and innovation to the communities in which they are established, thereby limiting their ability to effectively employ and contribute to economic expansion.

POLICY RECOMMENDATION

To ensure that credit to MSMEs is reflected on the growth of the economy in Nigeria, the study recommends that commercial banks should extend more funds to these categories of entrepreneurs with little or no collateral. Also, commercial banks must reorganize their MSMEs desks in order to provide them with long-term financial support, such as sound credit risk management and business development services to boost their growth. Additionally, these commercial banks should invest in MSMEs through venture capital arrangements.

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