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DEPOSIT MONEY BANKS' CREDIT ALLOCATION TO SELECTED SECTORS AND THE PERFORMANCE OF THE NIGERIAN ECONOMY

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ABSTRACT: *This study investigates the impact of credit allocation given by Deposit Money Banks (DMB) to the agricultural and manufacturing sectors on the performance of the Nigerian economy from 1986 to 2020. In achieving this objective, the study employs the Autoregressive Distributed Lag (ARDL) to evaluate the short-run and long-run impacts as well as the Granger causality tests to examine the nature of causality. The ARDL bounds test reveals the presence of long-run co-integration among the variables. The ARDL technique discloses that DMB credit allocation to the manufacturing sector has a negative and insignificant effect on economic growth in both the first and second lags. The ARDL technique also shows that DMB credit allocation to the agricultural sector has a positive and insignificant effect on economic growth in Nigeria. The granger causality test shows that there is no causal relationship between DMB credit to the manufacturing and agricultural sectors and economic growth. The study recommends that the government through financial authorities must ensure that DMB credits are monitored and channeled appropriately to the agricultural and manufacturing sectors so as to prevent such funds from entering private pockets.*

KEYWORDS: Deposit Money Banks, Credit Allocation, Economic Growth

JEL Classification: E51, G21, O40.

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INTRODUCTION

Over the course of economic history, the prevailing global perception of the credit proffered by deposit money banks to the economy has been one of indispensability (Ubesie, Echekoba, Chris-Ejiogu & Ananwude, 2019). Evolution of economic theory is strewn with a catalogue of economists who assert that the role of deposit money banks is desideratum for economic growth. Economists like King and Levine (1993) have argued that the task performed by deposit money banks facilitate the mobilization of savings in the economy, manages risks and enables financial transactions which are vital for economic growth.

It was Schumpeter (1912) that first championed the argument for the finance-led growth hypothesis. This hypothesis held that the financial sector plays a crucial role in channeling savings from the surplus agents in the financial sector to entrepreneurs and other economic agents engaged in production in the real sector of the economy. The hypothesis maintained that efficient credit allocation from financial institutions to the various segments of the economy facilitates technological innovation and investments in the economy. The corollary effect promotes economic performance as the volume of business and economic activity within the economy is increased, thereby encouraging economic growth. Since then, his argument has gathered momentum as the role of deposit money bank credit in generating economic growth has widely become accepted and supported by other researchers the world over (Madichie, Maduka, Oguanobi & Ekesiobi, 2014).

In most developing nations, the capital resources and financial infrastructure essential in directing investment funds from the financial sector to the different sectors of the economy has been grossly inadequate (Paul, 2017). This trend however has intensified the importance of deposit money bank credit allocation as the only lifeline in providing the necessary credit facilities and capital finance to the various sectors of the economy, especially as the financial markets are poorly developed in mobilizing the necessary financial resources needed to accelerate the desired level of economic growth. In most cases, the direction of credit flow is based on the direction of government policies and programmes, which could be directly linked to the growth of the economy (Ubesie et al., 2019).

In Nigeria, total deposit money bank credit to the economy show that it has been on the increase over time. Within the first ten years of the study scope, 1986 to 1995, the average value of deposit money bank credit to the economy indicated increase with an average value of N67.76 billion (Central Bank of Nigeria [CBN], 2020). The maximum value within this period was N180 billion in 1995 and a minimum value of N15.25 billion in 1986. In the ensuing decade of 1996 to 2005 however, the share of commercial banks credit to the economy was greatly improved as the average value rose to N792.03 billion. The maximum value within this period was N1,838.39 billion in 2005 and a minimum value of N238.60 billion in 1996. In the subsequent decade (2006–2015), the quantity of deposit money bank credits to the economy climbed sharply with an average value of N10,900.69 billion. The maximum value within this period was N1,8675.47 billion in 2015, with a minimum value of N2290.62 billion in 2006. The remaining three years (2016–2018) witnessed even more astronomical increase in deposit money bank credit, increasing from N2,1082.72 to N2,2092.04 and then to N2,2521.93 in 2016, 2017 and 2018 respectively. The total average deposit money bank credit for the entire scope of the study is N5554.59 billion with the highest value recorded at N22521.93 billion in 2018 (CBN, 2020).

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The agricultural and manufacturing sectors occupy dominant roles among other sectors that constitute the structure of the economy in Nigeria. As such, the Federal Government of Nigeria (FGN) formulated and initiated a myriad of national development plans, policies and reforms engendered at facilitating and improving the sectoral credit allocation by deposit money banks to these sectors. In the agricultural sector, several policies were introduced like the Agricultural Credit Guarantee Scheme Fund (ACGSF) established by Decree No. 20 of 197. Another policy launched by the FGN is the agricultural Credit Support Scheme (ACSS). The scheme was borne out of the collaborative effort of the FGN and the CBN in partnership with deposit money banks in Nigeria meant to facilitate farmers in gaining access to a prescribed fund of N50 billion (Chete, Adeoti, Adeyinka, & Ogundele, 2015).

The collective effect of these policies and reforms clearly improved deposit money banks sectoral allocation to the agricultural sector. In the first decade of the study scope (1986–1995), the average deposit money bank credit allocation to the sector stood at N2.54 billion. This figure was augmented in the ensuing decade (1996–2005) as the average deposit money banks credit allocation attained N5.96 billion. The subsequent decade (2006–2015) saw even more bank credit allocation to the agricultural sector expand as the average figure was recorded at N6.06 billion. Total deposit money banks credit allocation to the agricultural sector attained an all-time high at N525.95 billion in 2016 (CBN, 2020).

Deposit money banks credit allocation to the manufacturing sector has not been encouraging over the years. Despite the myriad of reforms embarked upon by the FGN, the manufacturing sector has recorded far less credit allocation from deposit money banks (Fapetu, Adegoriola & Azeez, 2021). Within the first decade of the study scope (1986–1995), the average figure of deposit money banks credit allocation to the manufacturing sector stood at a paltry N17.24 billion. This figure was improved during the succeeding decade (1996–2005) as the average deposit money bank credit allocation to the sector was N192.77 billion. In the next period of ten years (2006–2015), significant improvement in bank credit allocation to the manufacturing sector was realized. Deposit money bank allocation to the manufacturing sector was expanded as the average figure was recorded at N717.84 billion. Total deposit money bank credit allocation to the manufacturing sector attained an all-time high at N1179.69 billion in 2013. However, in a worrying trend, credit allocation to the sector has been on a consistent decline since 2014, falling from N18.22 billion in 2014 to N15.05 billion in 2017 (CBN, 2020).

The fluctuation in economic growth rate revealed an unstable and unsustainable pattern as disclosed by its ebb and flow in Nigeria. Starting from 1986, economic growth grew modestly at an average value of 2.54%, with its highest growth rate recorded in 1990 at 11.78% and lowest in 1993 at -2.04% (World Development Indicators, 2019). Within this period, the Nigerian economy suffered its first economic crisis four years after the introduction of the famed Structural Adjustment Programme (SAP) in 1986, when growth rate plummeted from 11.78% in 1990 to 0.36% in 1991. Economic recovery in the ensuing decade (1996–2005) witnessed improvement in economic performance as the average figure of growth rate was recorded at 5.96%. During this time, economic growth reached its zenith at 15.33% in 2003 and was at its lowest at 0.58% in 1999. The last ten years of the study scope (2006–2015) recorded modest increase in economic growth rate as the average value increased to 6.06% (World Bank, 2019).

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In spite of the increasing allocation of credit from DBM to selected sectors, the Nigerian economy has not had a significant change. It is on this background that this study seeks to answer these questions. Does deposit money bank credit allocation to the agricultural sector impact significantly on economic growth in Nigeria? What is the impact of deposit money bank credit allocation to the manufacturing sector on economic growth in Nigeria?

EMPIRICAL LITERATURE

A lot of research works have been conducted over deposit money banks sectoral credit allocation and economic growth in Nigeria which captured different sectors of the economy and how these sectors have significantly boosted economic activities and overall economic growth in their respective capacities. While some are considered credit allocation by deposit money banks as a profit driven factor, others view it from a different perspective which has to do with the direct impact of credit allocation on different sectors of the economy and how much growth it has impacted on the economy over time.

To investigate the impact of Deposit Money Banks (DMBs) on poverty reduction with a focus on microfinance banks in Nigeria, Fapetu et al. (2021) used co-integration test conducted using Bounds test and Autoregressive Distributed Lag (ARDL) model in the analyses. The result indicated that the current period of loans from microfinance banks and one period lag of interest rate have positive and significant impact on poverty level. Current period of access to microfinance banks and current period of interest rate have positive but insignificant impacts on the poverty level. One period lag of access to microfinance banks and current period of deposits liabilities of microfinance banks have negative and insignificant impact on poverty level. The study concluded that the impact of microfinance services to poverty rate indicated that the importance of microfinancing cannot be overemphasized in Nigeria. These have potentials and skill to extend economic process and reduce poverty. Undoubtedly, these policy instruments can therefore be utilized in the short, medium and future development programmes of a nation so as to place economy into the steady state and economic progress.

In the same vein, Ubesie et al. (2019) evaluated the effect of sectoral allocation of deposit money banks' credit on the growth of the Nigerian real economy from 2008Q1 to 2017Q4. Ordinary Least Square (OLS) technique was used as the methodology. The findings revealed that deposit money banks' credit to agriculture, industries, building and construction, and wholesale and retail trade have no significant effect on the real gross domestic product. The study recommended that deposit money banks should remove the disparagement that the agricultural sector is not viable, and lend to farmers with genuine needs for funds at a low interest rate. It was also suggested that the Central Bank of Nigeria should play a critical role in reducing the interest rate charged by deposit money banks in extending credit to the economy by cutting down the monetary policy rate to a single digit. Government should spend more on capital projects in basic infrastructure to attract investments in the economy.

The study conducted by Paul (2017) used vector error correlation model and Granger causality test to examine the impact of deposit money banks sectoral credit allocation on Nigeria economy between 1994 and 2015. The findings reveal that, the variables are stationary at first difference and the economic growth is a positive and significant function of lending to agriculture, manufacturing and general services. This study lent credence to the theoretically

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held notion of dependence of economic growth on credit lending to the strategic sectors, namely agriculture, manufacturing and general services. It also went further to buttress that these three sectors are significant contributors to economic growth.

In Nigeria, a study conducted by Maxwell and Egbeonu (2016) examined sectoral loans demand and performance of deposit money banks in Nigeria. Using ordinary least squares (OLS) tool. The study discovered that loans and advances to agriculture, quarrying and mining sectors have negatively contributed to the performance of banks, while manufacturing and real estate construction sectors have positively contributed to the performance of deposit money banks over the relevant period. Relying on these findings, the study recommends that banks should increase credit to the less preferred sectors such as agriculture, mining and quarrying sectors, which will lead to overall economic growth in Nigeria. The literature is replete with empirical studies of various jurisdictions around the world. This will help sharpen perspectives and policy direction.

Olowofeso, Adeleke and Udoji (2015) examined the impacts of private sector credit on economic growth in Nigeria using the Gregory and Hansen (1996) co-integration test that accounted for structural breaks and endogeneity problems. The method was applied to quarterly data spanning 2000:Q1 to 2014:Q4, while the fully modified ordinary least squares procedure was employed to estimate the model coefficients. The study finds a co-integrating relationship between output and its selected determinants, albeit with a structural break in 2012:Q1. Amongst others, findings from the error correction model confirmed a positive and statistically significant effect of private sector credit on output, while increased prime lending rate was inhibiting growth. In view of the financial intermediation roles of deposit money banks, the paper supports the ongoing efforts of the Central Bank of Nigeria (CBN) in promoting a sound and real sector-friendly financial system.

Nwakanma, Nnamdi and Omojefe (2014) evaluated the nature of long-run relationship and the direction of causality between economic growth and micro credits disbursed by private sector led micro finance institutions in Nigeria. The Autoregressive Distributed Lag (ARDL) technique was employed in analysing the time series data. The study finds a significant long-run relationship between Nigeria's economic growth and micro credits disbursed, while causality runs from economic growth to micro credits.

The study conducted in Libya by Rahamati and Cevik (2013) examined the causal nexus between financial development and economic growth in Libya between 1970 to 2010. Even though results differ with estimation methodology and model specification, it shows lack of long-run relationship between financial intermediation and output growth. The ordinary least squares shows that financial development has statistically significant but negative effect on real GDP per capita growth but the VAR-based estimations presented statistically insignificant results, although showing a negative coefficient to financial intermediation.

Adopting the Autoregressive Distribution Lag Bound Approach (ARDL) to examine the causality between banks private sector lending and economic growth in Nigeria between 1974 to 2010, Abdullahi, Adamu and Aliero (2013) discovered that there is a significant long-run correlation that exists between private sector lending and economic growth. However, there is no significant relationship between them in either or both directions. The research therefore concluded that Nigerian banks are acting neither supply-leading nor demand-following roles but agreed to the Schumpeterian independent hypothesis stage and recommended the

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implementation and adoption of more long-term loans for entrepreneurship ventures in Nigeria, instead of short-term and self-liquidating credit facilities preferred by Nigerian banks.

Akpansung and Babalola (20l2) examined the nexus between banking sector credit and economic growth in Nigeria within a period of thirty nine years (1970–2008). The causality of the variables was established using Granger causality test while a Two-Stage Least Squares (TSLS) estimation technique was used for the regression models. Findings from the Granger causality test reveal evidence of unidirectional causal correlation between Gross Domestic Product (GDP) and Private Sector Credit (PSC) and between Industrial Production Index (IND) and GDP. Estimated regression models show that private sector credit impacts positively on economic growth over the period under review but lending rate hinders economic growth.

METHODOLOGY

Model Specification

Yearly secondary data spanning between 1986 to 2020 were used for this study. The variables of interest include deposit money bank credit allocation to agricultural sector (CAS), deposit money bank credit allocation to manufacturing sector (CAM) in Nigeria and economic growth proxy by Gross Domestic Product (GDP). The data was sourced from the Central bank of Nigeria Statistical Bulletin, 2020. The study adopted the model of Paul (2017) which was developed and modified for the purpose of the study. The sectors of interest in the study are agricultural and manufacturing sectors. The study used Auto-Regressive Distributed Lag (ARDL) model to analyse the time series in order to achieve its objectives.

The functional relationship specified by the study is given as:

GDP = *f*(AGC, EXC, MRX, MISC, SMEC) …….....1

Economic output of GDP is taken as a dependent variable while the independent variables are deposit money bank credit to the Agricultural Sector (CAS), deposit money bank credit to the Manufacturing Sector, credit to Private Sector (CPS), and Broad Money Supply (M2).

Hence, the implicit form can be given as:

GDP = f(CAS, CAM, CPS/GDP, M2/GDP) …….2

where CAS = Deposit money bank credit to the Agricultural Sector in %

CAM = Deposit money bank credit to the Manufacturing Sector in %

CPS/GDP = Ratio of credit to Private Sector over GDP in %

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M_2/GDP = Ratio of Broad Money Supply over GDP in %

In addition, to compensate for other important variables that may have been omitted, the study includes two macroeconomic variables, which are Interest Rate (INTR) and Inflation Rate (INFR). They are used as control variables and serve as macro-economic factors that influence all sectors of the economy.

Hence, the linear explicit form of the model can be expressed thus:

$$GDP = \beta_0 + \beta_1 CAS + \beta_2 CAM + \beta_3 CPS/GDP + \beta_5 M_2/GDP + \beta_6 INTR + \beta_7 INFR + \mu_t \quad \ldots\ldots..3$$

where β_0 = Intercept/Constant

β_1- β_5 = Slope

μ_t = Error Term

The ARDL Long-run model for this study is specified as follows:

$$LOGGDP_t = \alpha_0 + b_{11} LOGRGDP_{t-I} + b_{21} LOGCAM_{t-I} + b_{31} LOGCAS_{t-I} + b_{41} CPS/GDP_{t-I} + b_{51} M2/GDP_{t-I} + b_{61} INTR_{t-I} + b_{71} INFR_{t-I} + e_t \quad \ldots\ldots..4$$

In this study, the short-run model estimates is given as:

$$\Delta GDP_t = \alpha_0 + \sum_{i=1}^{p} a1i\Delta LOGRGDP_{t-i} + \sum_{i=1}^{p} a2i\Delta LOGCAM_{t-I} + \sum_{i=1}^{p} a3i\Delta LOGCAS_{t-I} + \sum_{i=1}^{p} a4i\Delta CPS/GDP_{t-I} + \sum_{i=1}^{p} a5i\Delta M2/GDP_{t-I} + \sum_{i=1}^{p} a6i\Delta INTR_{t-I} + \sum_{i=1}^{p} a7i\Delta INFR_{t-I} + \lambda ECT_{t-I} + e_t \quad \ldots\ldots..5$$

The ECT is obtained from the residuals of the long-run model. Hence, the ARDL is basically a combination of short-run equation and long-run equation.

RESULTS AND DISCUSSION

Stationary test was conducted using both the Augmented Dickey Fuller (ADF) and Philips-Perrson (PP) test (Challis & Kitney, 1991; Granger & Newbold, 1974; Bowerman & O'connell, 1979; Dickey & Fuller, 1979).

Table 1: Unit Root Test at Levels

ADF UNIT ROOT TEST					PP UNIT ROOT TEST				
VARIABLES	T-stat	Prob	Stationarity	Order	VARIABLES	T-stat	Prob	Stationarity	Order
GDP	3.84*	0.00	Stationary	I/0	GDP	3.84*	0.00	Stationary	I/0
CAS	2.60	0.28	Non-Stationary	I/0	CAS	2.54	0.30	Non-Stationary	I/0
CAM	0.67	0.96	Non-Stationary	I/0	CAM	0.43	0.98	Non-Stationary	I/0
CPS/GDP	3.16	0.11	Non-Stationary	I/0	CPS/GDP	0.265	0.26	Non-Stationary	I/0

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M2/GDP	2.52	0.31	Non-Stationary	I/0	M2/GDP	2.00	0.57	Non-Stationary	I/0
INTR	3.34**	0.02	Stationary	I/0	INTR	3.42**	0.01	Stationary	I/0
INTR	2.96**	0.04	Stationary	I/0	INTR	2.96**	0.04	Stationary	I/0

*** *** Indicates 1%, 5% and 10% LOS

Source: Authors' computation using E-views 10, 2021

Table 2: Unit Root Test at 1st Difference

ADF UNIT ROOT TEST					PHILIP PERRON UNIT ROOT TEST				
VARIABLES	T-stat	Prob	Stationarity	Order	VARIABLES	T-stat	Prob	Stationarity	Order
GDP	3.84*	0.0000	Stationary	I/0	GDP	3.84*	0.0000	Stationary	I/0
CAS	6.43*	0.0000	Stationary	I/1	CAS	6.57*	0.0000	Stationary	I/1
CAM	4.30*	0.0000	Stationary	I/1	CAM	4.79*	0.0000	Stationary	I/1
CPS/GDP	5.24*	0.0000	Stationary	I/1	CPS/GDP	5.76*	0.0000	Stationary	I/1
M2/GDP	4.54*	0.0000	Stationary	I/1	M2/GDP	4.35*	0.0000	Stationary	I/1
INTR	3.34**	0.0002	Stationary	I/0	INTR	3.42**	0.0001	Stationary	I/0
INTR	2.96**	0.0004	Stationary	I/0	INTR	2.96**	0.0004	Stationary	I/0

*** *** Indicates 1%, 5% and 10% LOS

Source: Authors' computation using E-views 10, 2021

The result of unit root test at different levels from Table 1 reveals that only the variables LOGGDP, INTR and INFR were all stationary levels (I/0), while the variables LOGCAM, LOGCAS, CPS/GDP and M2/GDP were non-stationary levels. The preceding unit root results in Table 2 show that LOGCAM, LOGCAS, CPS/GDP and M2/GDP became stationary at their first difference (I/1). This implies that LOGCAM, LOGCAS, CPS/GDP and M2/GDP had to be differenced once for them to become stationary. This was achieved by comparing the ADF and PP statistics test with their respective 5% critical value of each variable. In addition, for variable to be stationary at any order of integration, ADF and PP statistics value must be greater the 5% critical value of the variable. Also, the stationarity can be confirmed through the probability of the test at the chosen level of significant (5%). The difference in the order of integration of the variables I(0) and I(1) may inform the existence of long run relationship. The co-integration test in ARDL called Bound test can be used in place of Johannsen co-integration.

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Table 3: Bounds Test for Co-integration

Test Statistic	Value	Signif.	I(0)	I(1)
F-Statistic	5.241197	10%	1.99	2.94
K	6	5%	2.27	3.28
		2.50%	2.55	3.61
		1%	2.88	3.99

Source: Authors' computation using E-views 10, 2021

The result of the Bounds test indicates that the F-statistic of the variables is 5.241197 with critical values of the Lower Bound 2.88 and the Upper Bound 3.99 respectively. This shows that the F-statistics 5.241197 is greater than the critical value of both the lower and the upper bounds in the model at 1% level of significance. This implies the rejection of the null hypothesis, while the alternative hypothesis is accepted. Hence, the test shows that there is co-integration (long-run relationship) between the variables in the model. Therefore, we employ the ARDL for the estimation of the model in this study.

Table 4: ARDL Long-run Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LNGDP (-1)	-0.209674	0.199963	-1.048563	0.3169
LNGDP (-2)	0.463844	0.166509	2.785692	0.0177
CPS_GDP	0.660545	0.74625	0.885152	0.395
CPS_GDP (-1)	-1.717576	1.030226	-1.667183	0.1237
CPS_GDP (-2)	3.780656	1.015067	3.724538	0.0034
INFR	-0.237878	0.05269	-4.514654	0.0009
INFR (-1)	-0.24909	0.081221	-3.06681	0.0107
INFR (-2)	0.155789	0.058125	2.680246	0.0214
INTR	1.258729	0.324087	3.883924	0.0025
INTR (-1)	-1.390032	0.345294	-4.025643	0.002
LNCAM	19.66695	5.600332	3.511748	0.0049
LNCAM (-1)	-0.096083	5.685992	-0.016898	0.9868
LNCAM (-2)	-13.80475	5.41987	-2.547063	0.0271
LNCAS	5.801812	2.856695	2.030952	0.0671
LNCAS (-1)	-1.823738	2.833758	-0.643576	0.533
LNCAS (-2)	-8.975442	2.784113	-3.223807	0.0081
M2_GDP	-3.145673	0.732337	-4.295388	0.0013
M2_GDP (-1)	2.61477	0.825956	3.16575	0.009
M2_GDP (-2)	-1.898996	0.569527	-3.33434	0.0067
C	-18.43428	6.948308	-2.65306	0.0225
R-Squared	0.892487	Mean Dependent Var		4.627514
Adjusted R-Squared	0.706782	S.D. Dependent Var		3.957321
S.E of Regression	2.142872	A Kaike Info Criterion		4.616402
Sum Squared Resid	50.51093	Schwarz Criterion		5.541555
Log Likelihood	-51.55423	Hannan-Quinn Criter.		4.917979
F-Statistic	4.805952	Durbin-Watson Stat		2.297588
Prob (F-Statistic)	0.005358			

Source: Authors' computation using E-views 10, 2021

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Table 4 shows the coefficients of LnGDP in lags 1 and 2 are -0.209674 and 0.463844 respectively. While the sign is negative for the first lag, it is positive for the second lag, indicating an inverse relationship in the first lag and a direct relationship in the second. However, the probability value of 0.3169 is insignificant at 5% level in the first lag while the probability value of 0.0177 is significant at 5% level in the second lag. The coefficient of CPS_GDP in the current year, as well as 1st and 2nd lags are 0.660545, -1.717576 and 3.780656. This implies that a unit change in CPS_GDP will cause the GDP to increase in the current year by 0.660545 and in the 2nd lag by 3.780656, but cause GDP to decrease in the 1st lag by 1.717576. Their corresponding p-values (0.395, 0.1237 and 0.0034) indicate that their effect on GDP is insignificant in the current year and the 1st lag at 5% level but significant only in the 2nd lag at 1% level.

The coefficient of INFR in the current year, as well as 1st and 2nd lags are -0.237878, -0.24909 and 0.155789 respectively. This implies that a unit change in INFR will cause the GDP to decrease in the current year by -0.237878 and in the 1st lag by -0.24909, but cause the GDP to increase in the 2nd lag by 0.155789. Their corresponding p-values (0.0009, 0.0107 and 0.0214) indicate that their effect on GDP is significant in the current year as well as the first and second lags at 5% level. The coefficient of INTR in the current year and 1st lags are 1.258729 and -1.390032. This implies that a unit change in INTR will cause GDP to increase in the current year by 1.258729 and decrease in the 1st lag by -1.390032. Their corresponding p-values (0.0025 and 0.002) indicate that their effect on GDP is significant in the current year as well as the first lag at 5% level.

The coefficient of LNCAM in the current year, as well as 1st and 2nd lags are 19.66695, -0.096083 and -13.80475 respectively. This implies that a unit change in LNCAM will cause the GDP to increase in the current year by 19.66695 and cause the GDP to decrease in the 1st and 2nd lags by -0.096083 and -13.80475 respectively. Their corresponding p-values (0.0049, 0.9868 and 0.0271) indicate that their effect on GDP is insignificant in the 2nd lag only, while the effect of LNCAM is significant in the current year and 1st lag. The coefficient of LNCAS in the current year, as well as the 1st and 2nd lags are 5.801812, -1.823738 and -8.975442 respectively. This implies that a unit change in LNCAS will cause the GDP to increase in the current year by 5.801812 but cause the GDP to decrease in the 1st and 2nd lags by -1.823738 and -8.975442 respectively. Their corresponding p-values (0.0671, 0.533 and 0.0081) indicate that their effect on GDP is insignificant in the 2nd year at 5% level but significant in the 1st and 2nd lags at 5% level.

The coefficient of M2_GDP in the current year, as well as 1st and 2nd lags are -3.145673, 2.61477 and -1.898996 respectively. This implies that a unit change in M2_GDP will cause RGDP to decrease in the current and 2nd lag by -3.145673 and -1.898996 respectively but cause the GDP to increase in the 1st lag. Their corresponding p-values (0.0013, 0.009 and 0.0067) indicate the effect of M2_GDP on GDP is significant in the current year as well as the 1st and 2nd lags at 1% level. The R^2 indicates that 89% of the variations in GDP are explained by the independent variables employed in the study. The p-value of the F-statistic shows the model of the study is significant at 1% level.

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Table 6: ARDL Short-run Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
C	0.426503	1.773227	0.240524	0.8134
D (GDP (-1))	0.043686	0.364927	0.119711	0.9064
D (GDP (-2))	0.59619	0.270017	2.207972	0.0444
D (LNCAM (-1))	-3.46796	6.408187	-0.541176	0.5969
D (LNCAM (-2))	-8.20701	6.135901	-1.337539	0.2024
D (LNCAS (-1))	3.198699	3.380309	0.946274	0.3601
D (LNCAS (-2))	6.370836	3.688894	1.727032	0.1061
D (CPS_GDP (-1))	-0.09167	0.853475	-0.107403	0.916
D (CPS_GDP (-2))	1.475893	0.93723	1.574739	0.1376
D (M2_GDP (-1))	-0.45712	0.835272	-0.54727	0.5928
D (M2_GDP (-2))	-0.018	0.708885	-0.015229	0.9881
D (INTR (-1))	-0.29862	0.366984	-0.81372	0.4394
D (INTR (-2))	-0.44289	0.270321	-0.638381	0.1236
D (INFR (-1))	-0.03058	0.079818	-0.383102	0.7074
D (INFR (-2))	0.05304	0.063441	0.836045	0.4172
ECT (-1)	-0.98561	0.366544	-2.688911	0.0176
R-Squared	0.685824	Mean Dependent Var		-0.1789
Adjusted R-Squared	0.349207	S.D. Dependent Var		4.492296
S.E of Regression	3.624014	A Kaike Info Criterion		5.717568
Sum Squared Resid	183.8687	Schwarz Criterion		6.424873
Log Likelihood	-69.7635	Hannan-Quinn Criter.		5.956637
F-Statistic	2.0374	Durbin-Watson Stat		2.020715
Prob (F-Statistic)	0.095714			

Source: Authors' compilation using E-views 10, 2021

The coefficient of C reveals that holding all other variables constant, GDP will increase by 0.426503. Its corresponding probability value of 0.8134 shows that it is insignificant at 5% level. The coefficient of LOGGDP at lags 1 and 2 reveal themselves to be 0.43686 and 0.59619 respectively. They show that ceteris paribus, a unit change in the GDP will initiate an increase of 0.43686 and 0.59619 in the first and second lags respectively on itself. However, the associating probability values in the first and second lags (0.9064 and 0.0444) show themselves to be insignificant at the 5% level of significance in the first lag, while the p-value of the second lag (0.0444) is significant at the 5% level. The coefficient of LOGCAM in lags 1 and 2 reveal themselves to be -3.46796 and -8.20701 respectively. They show that ceteris paribus, in the short-run, a unit change in LOGCAM will initiate a decrease of -3.46796 and -8.20701 in the 1st and 2nd lags respectively on GDP. However, their associating probability values of 0.5969 and 0.2024 show themselves to be insignificant at the 5% level of significance.

The coefficient of LOGCAS in lags 1 and 2 reveal themselves to be 3.198699 and 6.370836 respectively. They show that ceteris paribus, in the short-run, a unit change in LOGCAS will initiate an increase of 3.198699 and 6.370836 in the 1st and 2nd lags respectively on GDP. However, their associating probability values of 0.3601 and 0.1061 show themselves to be insignificant at the 5% level of significance. The coefficient of CPS/GDP in lags 1 and 2 reveal themselves to be -0.09167 and 1.475893 respectively. They show that ceteris paribus, a unit

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change in CPS/GDP will initiate a decrease of -0.09167 and an increase of 1.475893 in all lags on GDP. However, their associating probability values of 0.916 and 0.1376 show themselves to be insignificant at the 5% level of significance. The coefficient of M2/GDP in lags 1 and 2 reveal themselves to be -0.45712 and -0.0108 respectively. They show that, ceteris paribus, a unit change in M2/GDP will initiate a decrease of -0.45712 and -0.0108 in the first and second lags respectively on GDP. However, their associating probability values of 0.5928 and 0.9881 show themselves to be insignificant at the 5% level of significance.

The coefficient of INTR in lags 1 and 2 reveal themselves to be -0.29862 and -0.44289 respectively. They show that, ceteris paribus, a unit change in INTR will initiate a decrease of -0.29862 and -0.44289 in the first and second lags respectively on GDP. However, their associating probability values of 0.4294 and 0.1236 show themselves to be insignificant at the 5% level of significance. The co-efficient of INFR in lags 1 and 2 reveal themselves to be -0.03058 and 0.05304 respectively. They show that, ceteris paribus, a unit change in INFR will initiate a decrease of -0.03058 in the first lag only, while a unit change in INFR in the second lag will bring about an increase of 0.05304 on GDP. However, their associating probability values of 0.7074 and 0.4172 show themselves to be insignificant at the 5% level of significance. Finally, the speed of adjustment (λ) is -0.98561. This signifies that, the previous period's deviation of GDP from the long-run equilibrium is corrected at an adjustment speed of 98% in the following year. The speed of adjustment is correctly signed and statistically significant at 1% level of significance.

Diagnostic Tests for Robustness of ARDL

Table 6: Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:			
Null Hypothesis: No Serial Correlation at up to 2 Lags			
F-Statistic	0778508	Prob. F (2,9)	0.4877
Obs* R-Square	4.572076	Prob. Chi-Square (2)	0.1017

Source: Authors' compilation using E-views 10, 2021

The null hypothesis of the LM test stipulates that there is no serial correlation in the model. The guiding principle to accepting or rejecting the null hypothesis is that the probability values must be greater than 5% level of significance. In Table 4.6, the p-values of the F-statistic is 0.6704 which is evidently above 5% level. Hence, the null hypothesis is accepted that there is no autocorrelation in the model.

Table 7: Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.639098	Prob. F(13,18)	0.7923
Obs*R-squared	10.10575	Prob. Chi-Square(13)	0.6853
Scaled explained SS	3.560515	Prob. Chi-Square(13)	0.995

Source: Authors' compilation using E-views 10, 2021

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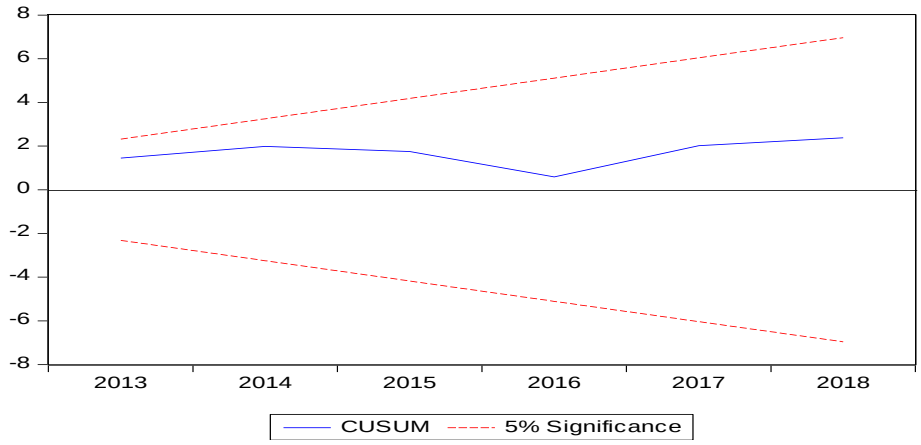

Figure 1: CUSUM Test for Stability

Source: Authors' compilation using E-views 10, 2021

The essence of the stability test is to ensure the dynamic stability of the model. In order to achieve this, this study employs the CUSUM test. The guiding principle of the CUSUM test stipulates that insofar as the blue line equation of the model falls in between the red lines, the model is said to be dynamically stable. As can be viewed from Figure 1, the blue equation line lies in between the red lines indicating that the model is dynamically stable.

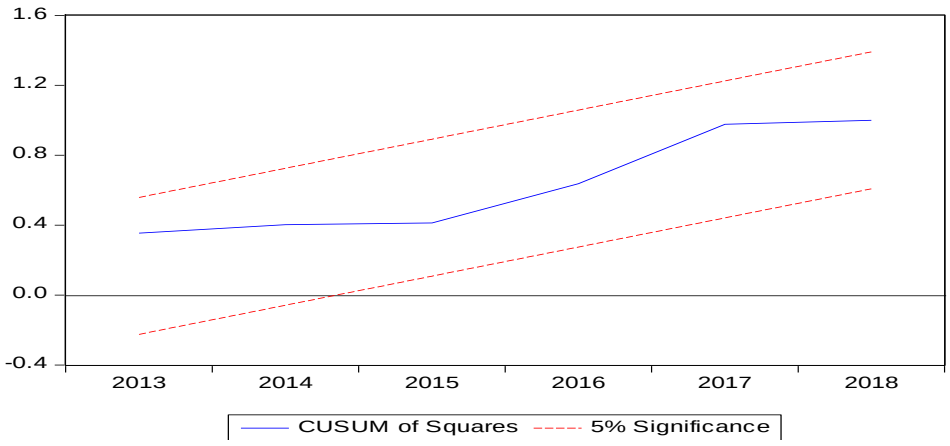

Figure 2: CUSUM of Squares Test for Stability

Source: Authors' compilation using E-views 10, 2021

The guiding principle of the CUSUM test stipulates that insofar as the blue line equation of the model falls in between the red lines, the model is said to be dynamically stable. As can be viewed from Figure 2, the blue equation line lies in between the red lines indicating that the model is dynamically stable.

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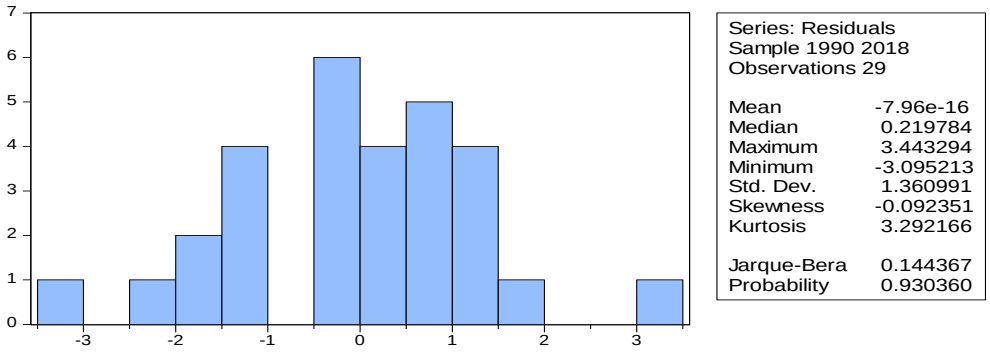

Figure 3: Test for Normality

Source: Authors' compilation using E-views 10, 2021

The test for normality is conducted to evaluate if the data distribution of the model mirrors that of a normal distribution. In Graph 3, the value of the skewness result (0.09) implies that the model is moderately skewed and mirrors that of a normal distribution. The value of the kurtosis result of 3.29 suggests that the data is leptokurtic in nature. The probability value of the Jarque-Berra is 0.93, which indicates that the data distribution of the model is normally distributed; this is because the p-value of JB is greater than the 5% level, indicating normal distribution.

DISCUSSION AND FINDINGS

Based on the results, there is a long-run relationship among the variables. This implies that, even in the event of shocks, which may cause disruptions in the economy, in the long-run, the variables will co-integrate. The results of this study agree with the findings of Fapetu et al. (2021) and Olowofeso et al. (2015) that show a long-run relationship. Upon the discovery of a long-run relationship, the study advances to conduct an Error Correction Model. The appropriate estimate technique to employ after co-integration is confirmed is the Error Correction Model, which is run under the framework of an ARDL technique.

The results of the ECT short-run revealed that both coefficients for the first lag and second lag are negative. However, none of the p-values are significant. This implies that the credit proffered by DMBs to the manufacturing sector is insignificant to causing significant changes in economic growth. The results and findings of this study are in tandem with the findings and results of Nwakanma et al. (2014), Paul (2017) and Ubesie et al. (2019). This implies that the DMB's credit advanced to the manufacturing sector is inadequate to stimulating the desired level of economic growth in Nigeria. The result of the ECT short-run also reveals that only the sign for the third lag is negative, while the signs for the first and second lags are positive. However, none of the p-values are significant. This implies that the credit proffered by DMBs to the agricultural sector is insignificant to causing significant changes in economic growth. The results and findings of this study are in tandem with the findings and results of Fapetu et al. (2021), and Maxwell and Egbeonu (2016). This implies that the DMB's credit advanced to

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the agricultural sector is inadequate to stimulating the desired level of economic growth in Nigeria.

CONCLUSION AND RECOMMENDATIONS

The study proposes that a possible reason for this is that most manufacturing businesses in Nigeria are not registered with the Corporate Affairs Commission (CAC) because of fear of taxes, and thereby operate in the black market. As a result, it becomes difficult for them to secure credit from commercial banks who require documentation. The credit proffered to registered manufacturing companies become inadequate to stimulate economic growth. The study finds that there is no influence of DMB's credit to the agricultural sector on GDP growth in Nigeria. The possible reason for this is that banks are usually reluctant to give credit to farmers because of the long gestation period between farming and harvesting. As a result, credit to the agricultural sector becomes insufficient to stimulate economic growth. The study also found that there is no causal link between DMB credit to the manufacturing and agricultural sectors and GDP.

The study therefore recommends the following: The government through financial authorities must take cognizance of the importance of DMB credit to the manufacturing sector. The Central Bank of Nigeria should engage in policies that offer incentives to manufacturers for registering with the CAC. The CBN should make mandatory laws for DMBs to offer credit to farmers in Nigeria. The financial authorities should consider a means of wooing farmers into the agricultural sector and enact follow-up programmes to ensure they secure credit required for boosting agricultural output. The government through the CBN should reduce the documentation required for securing credit in commercial banks. Most farmers in rural areas are uneducated and lack most of the documents required. The government should scale back on tariffs and taxes that seem to dissuade manufacturers from registering their companies.

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