

FINANCIAL INCLUSION: A PANACEA FOR NATIONAL DEVELOPMENT IN NIGERIA

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Abstract

Development is a key factor in every society, although, the understanding of the concept differs from society to society. That is, each society has ways of developing itself passing through the necessary developmental stages. The success of these stages is a function of many key policies, programmes, and initiatives. The study employed the Autoregressive Distributed Lag (ARDL) bounds testing technique to empirically examine the effect of financial inclusion on national development in Nigeria from 1980 to 2018. The empirical result indicates the existence of Co-integration (long-run) relationship between national development (proxy by Human Development Index-HDI) and financial inclusion (measured by access to financial institutions, access to ATM facilities, access to credit, and the credit to the private sector). In addition, the result demonstrates the presence of statistically significant positive impact of access a bank, ATM facilities, and credit on national development, as well as the existence of significant negative impact of credit to the private sector on national development in the long run. Equally, in the short run, it was discovered that, while access to the bank in the current and previous year, and the access to ATM facilities in the past year impact on national development positively. In essence, while these entails the tendency of improved level of financial inclusion enhancing national development, policy makers are therefore recommended to put in place strategies which will further enhance the level of financial inclusion in the country.

Keywords: Financial Inclusion, National Development, Nigeria

JEL Classifications: G2, D14, P34, O1, Q01, C22

1.0 INTRODUCTION

The principle of financial inclusion has assumed greater level of importance in recent times, due to its perceived importance as a driver of economic growth and national development (Demirgüç-Kunt, Klapper, Singer, Ansar & Hess, 2018). Given that millions of people are excluded from formal financial services globally, there is, however, a potential loss of deposits or savings, investible funds and an attendant loss of capacity of the global economy to generate wealth (Okoye, Adetiloye, Erin, & Modebe, 2017). Considering the fact that financial inclusion has obvious far reaching economic and financial implication (Kama & Adigun, 2013), it has therefore become an explicit strategy for accelerated economic growth, and the achievement of inclusive growth and national development in a country, because of its ability to expedite efficient allocation of productive resources, thus reducing the cost of capital (Nwafor & Yomi, 2018). This realization, in the recent past, was the major impetus for the adoption of policies and measures aimed at growing global financial inclusion as a means of promoting world economic prosperity. Notwithstanding this global consensus, achieving pervasive financial inclusion has remained a global challenge, especially in most Sub-Saharan Africa and low income countries (Kama & Adigun, 2013).

For instance, in Nigeria, like most Sub-Saharan Africa countries and developing economies, majority of the adult population are still largely financially excluded/unbanked (Demirgüç-Kunt, et. al., 2018). Although, the Central Bank of Nigeria (CBN) through the introduction and adoption of the National Financial Inclusion Strategy (NFIS), which aimed at reducing the number of financially excluded Nigeria's adult population to 20 percent by 2020, was able to raise the level of financial inclusion in the country from 53.7 percent in 2010, to 60.3 percent in 2012, and 60.5 percent in 2014, however, these success was short-lived, as the level of financial inclusion in the country declined to 58.4 percent in 2016 (Central Bank of Nigeria [CBN], 2018) and 40 percent in 2017 (Demirgüç-Kunt, et. al., 2018), which therefore indicates the presence of widespread financial exclusion among more than half of the adult population, with its prevalence in rural areas, the Northern-Nigeria (especially North West and North East) geo-political region, and among female population (CBN, 2018), even with the obvious improvements recorded in other parts of the world (Demirgüç-Kunt, et. al., 2018).

Relative to this abysmal level of financial inclusion, the Nigerian society has also continue to experience series of macroeconomic instability, financial system distress, political uncertainty, unemployment, insecurity, high incidence of poverty, mismanagement of natural resources, and income inequality (Ugoani, 2017, cited in David, Sakanko & shuni, 2019; Omojolaibi, 2017), hunger, lack of shelter, inability to access basic health care delivery system, electricity, pipe borne water, education, the prevalence of several diseases (Sakanko & David, 2018), incidence of low adult literacy rate (51.1 percent), low life expectancy at birth (53.9 years), high rate of infant, under-five and maternal mortality, high incidence of out of school children, and high malnutrition rate (United Nation Development Programme [UNDP], 2019; World Development Indices [WDI], 2019; David, 2018), among other precarious development indices and ills in the country, in spite of the huge human, material and natural resources at her disposal (Ekundayo, 2015; Lawal & Oluwatoyin, 2011; David & Sakanko, 2019). Therefore, with the recent shameful and unfortunate achievement of Nigeria as “the world poverty capital”, due to the incidence of extreme poverty among 91.16 million Nigerians (Vanguard, 2019; Kazeem, 2018), ahead of India’s 73 million (Vanguard, 2018), coupled with the low Human Development Index (HDI – average achievement in three basic dimensions of human development — a long and healthy life, knowledge and a decent standard of living) which placed Nigeria’s HDI rank in 2017 at 157 out 189 countries (UNDP, 2019), it is obvious that Nigeria is not on the path towards attaining inclusive growth and national development, even with the adoption of several development plans, strategies and programmes.

The presence of this social anomalies, which hampers inclusive growth and national development has been attributed to the abysmal level of financial inclusion in the country (Devarajan & Fengler, 2013, cited in Tita & Aziakpono, 2017), due to the fact that financial inclusion can contribute to economic growth through value creation of small businesses and the generation of local savings, which tend to increase productive investments in local businesses, with positive spill-over effects on improvements in human development indicators – health, nutrition and education (Onaolapo, 2015; Babajide, Adegboye, & Omankhanlen., 2015). It has been argued that increased access to financial services that are well suited for low-income earners have the tendency of boosting effective demand, which in turn induce investment, employment, income generation (Bakari, Donga, Idi, Hedima, Wilson, Babayo & Ibrahim, 2019), enormous capital accumulation, credit creation, thriving of investment and economic activities in an

economy (Kama & Adigun, 2013), low poverty rate, and efficient and equitable distribution of scarce resources for the improvement of societal wellbeing (Umar, 2013, cited in Bakari, Donga, et al., 2019), which ultimately sets the path toward the attainment of inclusive growth and national development (Fadun, 2014; Bruhn & Inessa, 2009). While the improvement in the level of financial inclusion might not entirely eradicate poverty, it can clearly play a role in reducing poverty and the impact thereof, as well as boosting welfare and standard of living, through the provision of suitable financial services for the poor (Mugo & Kilonzo, 2017; Dupas, Karlan, & Ubfal, 2016). In essence, as access to basic financial services increases, it tends to result to increase in economic activities and employment opportunities of households, which will cause the disposable income of households to rise, thus leading to more savings and a robust deposit base for the bank, and the multiplier effect resulting in inclusive economic growth and national development (Migap, Okwanya, & Ojeka, 2015).

While it is possible that, to achieve financial inclusion goals, more bank accounts can be opened, due to the fact it allows people to make transactions and save money (Van & Linh, 2019), and it also bears the *prima facie* (accepted as correct until proved otherwise) evidence of financial inclusion, however, the ownership of a bank account in itself is not enough (Amadou, 2018), as compared to the access to all financial services, which is the true test of being included in the formal financial sector (Michael, 2016). Notwithstanding, this process (of financial account ownership) can greatly affect the behaviour and well-being of poor people (Amadou, 2018), since people with access to savings accounts or simple informal savings technologies are more likely to increase consumption, productivity and income, increase investment in preventive health, reduce vulnerability to illness and other unexpected events (Dupas & Robinson 2009, 2011; Ashraf, Aycinena, Martinez, & Yang, 2010), and increased access to markets, which also facilitate access to credit, and supports savings/investment cycle, and therefore, allows for capital accumulation and asset building (Mugo & Kilonzo, 2017), which is key in the attainment of inclusive growth and national development.

Unequivocally, there exists no known accessible study on financial inclusion and national development, hence, this study will contribute to the literature on financial inclusion, by observing the effect of financial inclusion on national development in Nigeria, using the ARDL bound testing approach, and conducting important diagnostics, which most studies on financial inclusion

ignored. Furthermore, this study will extend the scope from 1980 to 2018, in order to capture significant changes in the Nigerian society within these periods. Accordingly, other estimation methods including the Fully Modified Least Square (FMOLS), Dynamic Least Squares (DOLS), and Canonical Cointegrating Regression (CCR) will be employed to ascertain the consistency and robustness of the results that are generated using the ARDL bounds testing technique.

Based on the foregoing, this paper, therefore, intends to evaluate and investigate the effect of financial inclusion on national development in Nigeria. The remainder of this paper is organized as follows. Section two includes literature review, while section three describes the methodology. Section four provides the results and discussion, and section five concludes the paper.

2.0 LITERATURE REVIEW

In simple terms, financial inclusion connotes the access to financial services by members of the public, especially the financially disadvantaged at an affordable cost (Ibeachu, 2010; Onalapo & Odetayo, 2012; Grant & Kagan, 2019). It can be defined as the provision of a broad range of high quality financial products such as savings, credit insurance, payment and pensions which are relevant, appropriate and affordable for the entire adult population, especially the low-income segment of the economy (Enhancing financial innovation and Access [EFIA], 2013). Similarly, financial inclusion can be defined as the delivery of financial services at affordable costs to the unbanked and low-income segments of the society (Otiwu, Okere, Uzowuru, & Ozuzu, 2018), as well as the availability and equality of opportunities to access financial services that meet the specific needs of users without discrimination (Nanda & Kaur, 2016). Financial inclusion also encompasses access to credit from formal financial institutions that allow adults to invest in educational and business opportunities, as well as the use of formal insurance products that allow people to better manage financial risks (Demirguc-Kunt, Klapper & Singer, 2017).

On the other hand, while development – a concept that is a victim of definitional pluralism (Lawal & Oluwatoyin, 2011), as distinct from growth – is simply an encompassing process involving the steady and systematic change in the cultural, economic and political spheres of society in a way that increases production, empowers the people and their communities, protects the environment, strengthens institutions, grows quality of life and promotes good governance, or broadly, as the kind of change that is defined in the direction of capacity building, towards self-sustenance, growth and self-fulfilment, as it affects individuals or institutions in a society

(Ekundayo, 2015), national development can be defined as the overall development or a collective socioeconomic, political and technological advancement of a country or nation, which is best achieved through development planning (Lawal & Oluwatoyin, 2011).

Furthermore, national development can be defined as the quality improvement in the various sectors of national life such as the political, ethical, socio-psychological, and economic spheres of national existence, which combined, to define and assure quality and productive existence for the citizens of a country. It can also be defined as the accelerated economic, administrative, social, political, cultural and industrial changes in a condition considered desirable to achieve the progress of civilisation (Ebeh, 2015). In addition, national development can be attributed to the gradual manifestation of positive changes in the economic, industrial, political, social, cultural and administrative life of a country (Ogai, 2003, cited in Ebeh, 2015), as well as the development of a nation as a whole, or the all-round and balanced development of different aspects and facets of the nation, which includes the full-growth and expansion of industries, agriculture, education, social, religious, political and cultural institutions (Bawa, 2019).

The fundamental departure of this study from previous rests on the fact that financial inclusion influences national development. This argument is anchored by finance-growth theory of (Stolboy, 2012), recognizes the lack of access to finance as a critical factor responsible for sluggish growth. Hence, access to a safe, effective, easy and affordable source of finance is acknowledged as a pre-condition for quickening growth and reducing disparities which create equal opportunities, enables economically and socially excluded people to integrate better into the economy and actively contribute to the national development. This has been supported by (Demirguc-Kunt et al, 2018; Gul, Usman, and Majeed 2018; Otiwu, Okere, Uzowuru and Ozuzu 2018), that a well functioning financial system could lead to economic growth. For instance, through efficient financial mediation, a conducive environment is created which brings lenders and borrowers of funds together and thereby reduces the search and the transaction cost associated with finance.

Empirically, while research on the impact of financial inclusion on inclusion growth and national development has been relatively scanty, significant amount of research has been conducted on the impact of financial inclusion on economic growth, both from the perspective of countries within the same region, developed and developing economies. For instance, Van and

Linh (2019) used PLS to evaluate the impact of financial inclusion on economic development in Asian-Pacific countries, within 2010–2015 period. The empirical result shows the existence of significant correlations between the numbers of bank branches, ATMs and domestic credit to the private sector, as indicators of financial inclusion and economic development in the economy of the Asian-Pacific countries. Similarly, Raichoudhury (2016) used the Financial Access Survey (FAS) and the Index of Financial Inclusion (IFI) developed by Sarma (2012) to observe the relationship between financial inclusion and human development across countries. The author discovered the existence of significant positive correlation between levels of human development and financial inclusion in the countries observed move closely with each other (with few exceptions). Gul, Usman, and Majeed (2018) employed fixed effect model and Two-stage least square (2SLS) to examine the impact of financial inclusion on economic growth in 185 countries covering the period 1996 to 2015. The empirical results suggest that financial inclusion, as measured by bank account ownership, banks branch, number of ATM and life insurance has a significant positive impact on economic growth of the 185 countries. In addition, Park and Mercado (2015) examined the impact of financial inclusion on poverty and income inequality in 37 developing economies in Asia. Results shows that per capita income, rule of law, and demographic characteristics significantly affect financial inclusion in the developing Asian economies. In addition, the authors discovered the significant negative impact of financial inclusion on poverty and income inequality.

In Nigeria, scholars also examined the impact of financial inclusion on economic growth. For example, Otiwu, Okere, Uzowuru and Ozuzu (2018) used OLS estimation technique and the Johansen co-integration technique to examine the relationship between financial inclusion and economic growth in Nigeria within 1992–2013 period. The Johansen co-integration result indicate the presence of long-run relationship between financial inclusion and economic growth. In addition, the authors also discovered that loan and advances are the major and significant element of financial inclusion which induces growth in the Nigerian economy. Similarly, Onalo, Lizam and Kaseri (2017) evaluates the effects of financial inclusion on the Nigerian economy during the period 1982 – 2014 employing Johansen co-integration technique and Vector Error Correction Model (VECM). The results of Johansen co-integration technique and Granger causality test attest to the presence of long-run relationship and the absence of causality between economic growth and financial inclusion in rural areas, respectively. In addition, the VECM result indicates the

presence of significant long term effect of financial inclusion on the Nigerian economy. Okoye, Adetiloye, Erin and Modebe (2017) employed OLS technique to determine the effect of financial inclusion on economic growth and development in Nigeria over the period 1986–2015. The empirical results confirm the presence of significant impact of financial inclusion on the economy (and in rural areas) through credit and loans. Onaolapo (2015) also used OLS estimation technique to examine the effects of financial inclusion on the economic growth of Nigeria during the 1982-2012 period. The results indicate the presence of significant influence of financial inclusion on economic growth and poverty alleviation.

Furthermore, Oyewo and Oyewole (2014) employed OLS technique and correlation analysis to examine the link between financial system, financial inclusion and economic growth in Nigeria, within the period 1992 – 2007. The result indicates the presence of significant positive impact of financial inclusion, proxy by loans and advances by rural branches of Commercial Banks and Commercial Banks Loans to Small Scale Enterprises, on economic growth. Adeola (2016) used FMOLS technique to explore the impact of financial inclusion and financial development on economic diversification in Nigeria within 1981 to 2014 period. The results indicate the existence of significant positive impact of financial development and financial inclusion, based on financial access and usage, on economic diversification. In contrast, Nkwede (2015) observed the influence of financial inclusion on the Nigerian economy, covering the period of 1981 – 2013. Employing the OLS estimation technique, the results show the presence of significant negative impact of financial inclusion on the growth of Nigeria economy.

3.0 METHODOLOGY

Drawing from literature (Van & Linh, 2019), it is argued that the level of access to banks, access to ATM, and access to credit induces changes in economic and national development. In other words, to empirically examine the effect of financial inclusion on national development, an econometric model is specified as:

$$HDI_t = \alpha_0 + \beta_1 A2Bank_t + \beta_2 A2ATM_t + \beta_3 A2Credit_t + \mu_t \quad (1)$$

Where; *HDI* denotes Human Development Index, a measure for national development; *A2Bank* is Access to Bank; *A2ATM* denotes Access to ATM; and *A2Credit* is the access to credit. Identities α_0 , $\beta_1 - \beta_4$ and μ_t denotes the intercept, slope coefficient and error term.

To estimate the relationship between the variables, the ARDL bound testing technique for cointegration was employed. The choice of this model is guided by the numerous advantages which it has over other co-integration methods (such as residual-based technique and Maximum likelihood test), which has been extensively discussed in literatures (see Sakanko, Obilikwu & David, 2019; Abu, 2017). The ARDL model to be estimated is specified as follows:

$$\Delta HDI_t = \alpha_0 + \beta_1 \sum_{i=0}^n \Delta HDI_{t-i} + \beta_2 \sum_{i=0}^n \Delta A2Bank_{t-i} + \beta_3 \sum_{i=0}^n \Delta A2ATM_{t-i} + \beta_4 \sum_{i=0}^n \Delta A2Credit_{t-i} + \varepsilon_{t-1} + v_t \quad (2)$$

Where; Δ is differentiation identity; HDI_{t-1} is the lag of the dependent variable and ε_{t-1} is the one period lag of the error term (v_t). As extensively discussed in literatures (see Sakanko & David, 2018; Sakanko, Obilikwu & David, 2019, Abu, 2018; Abu, 2019; Sakanko & David, 2019), the procedure of the ARDL technique for cointegration requires the series to be stationary of order not more one (i.e. I(1)). For this purpose, Augmented Dickey Fuller (ADF) and Philips-Perron (PP) will be used to check the stationarity properties of the variables that are employed in this study. Equally, since the presence of correlation between series might not entail the presence of causality among the series, hence the Granger Causality test will be employed to test for causality among the variables.

This study employed annual data from 1980 to 2018. The data on HDI (Human Development Index – a measure for economic development) was collected from the United Nations Development Programme (UNDP), while data on access to bank (measured by number of commercial bank branches per 100,000 adults) was collected from Central Bank of Nigeria (CBN) Annual Statistical Bulletin. Similarly, access to ATM (measured by number of ATMs per 100,000 adults) and access to credit (measured by domestic credit to the private sector, as a percentage of the GDP) were collected from World Development Indicators (WDI).

4.0 RESULT AND DISCUSSION

In checking the stationarity properties of the data used in this study, the Augmented Dickey-Fuller (ADF) and Philips-Perron (PP) were employed to conduct the unit root test for the series. These tests compare the null hypothesis “series has a unit root” against the alternative hypothesis that the “series does not have a unit root”. Presented in table 1 below:

Table 1: Result of Unit Root Tests

Variables	ADF		P-P	
	Levels	First Diff.	Levels	First Diff.
<i>HDI</i>	-0.387696	-6.114477*	0.203911	-9.588249*
<i>A2Bank</i>	-2.399647**	-4.160241*	-2.313504**	-4.100235*
<i>A2ATM</i>	-0.041501	-4.379750*	-0.189621	-4.379750*
<i>A2Credit</i>	-0.855100	-4.875126*	-0.867878	-4.747156*

Note: * and ** denotes a rejection of the null hypothesis of no unit root at 1% and 10% levels, respectively

The stationarity result presented in Table 1 shows that all series are stationary at first different, except *A2Bank* stationary at level. This, therefore, indicates that the series is a mixture of I(0) and I(1), that is while *HDI*, *A2ATM*, and *A2Credit* were made stationary after first difference, *A2Bank* was stationary at level, which thus validates the use of the ARDL bounds testing method to cointegration (Pesaran & Shin, 1999; Pesaran, Shin, & Smith, 2001), to estimate the relationship between the variables. Estimated as follows:

Table 2: ARDL Bound Testing for Co-integration

Dependent Variable	Function		$k - 1$	F-Statistics	
<i>HDI</i>	$f(HDI/A2Bank, A2ATM, A2Credit)$		3	7.456761	
Asymptotic critical values					
1%		5%		10%	
I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
3.65	4.66	2.79	3.67	2.37	3.2

From the ARDL bound testing results presented in Table 2, it shows that the computed f-statistics (7.456761) exceeds the upper bound (I(1)) at 1 percent level. This, therefore, confirms the existence of co-integrating(long-run) relationship between financial inclusion (access to a bank, ATM and credit) and national development.

After confirmed the existence of a cointegrating relationship between national development (measured by HDI) and financial inclusion (measured by access bank, ATM and credit). There is a need to conduct a diagnostic test to evaluate the method of analysis assumptions

and model correct specification and stability to determine whether to proceed with the analysis or modify the variables in case classical assumptions of Ordinary least square is violated. The result is presented in table 3 below:

Table 3: Diagnostic Tests

LM Test Statistics	Results
Autocorrelation: $\chi^2(2)$	2.109652 (0.3483)
Heteroscedasticity: $\chi^2(2)$	0.726857 (0.3939)
Normality: Jaque-Bera	0.988593 (0.610000)
Functional Form: Ramsey RESET F-stat (1,22)	4.659489 (0.0421)
CUSUM and CUSUMQ	Stable

The diagnostics results reported in Table 3 shows that the model employed passes the diagnostic tests including serial correlation (Durbin-Watson stat. and Breusch-Godfrey Serial correlation LM test), normality (Jaque-Bera), functional form (Ramsey RESET) and heteroscedasticity (ARCH test). In addition, the plot of the Cumulative Sum of Recursive Residuals (CUSUM) and Cumulative Sum of Squares of Recursive Residuals (CUSUMQ) which lies within the 5% significant lines/critical boundaries, therefore confirms the stability of the model.

Haven ascertained the existence of cointegration and diagnostic test, the ARDL model was estimated based on the optimal lag-length (2,2,2,2) suggested by Akaike Information Criterion (AIC). The long-run and short-run result of the selected models are presented in Table 4 (Pane A & B).

Table 4: Results of ARDL Model

Panel A: Long-run Coefficients – Dependent Variable: <i>HDI</i>				
Regressor	Coefficient	Std. Error	t-Statistic	Prob.
<i>Constant</i>	0.2358	0.0772	3.0547*	0.0056
<i>A2Bank</i>	0.4294	0.1838	2.3367**	0.0285
<i>A2ATM</i>	0.0187	0.0050	3.7566*	0.0010
<i>A2Credit</i>	-0.0143	0.0079	-1.8189**	0.0820
Panel B: Short-run Coefficients – Dependent Variable: ΔHDI				
Regressor	Coefficient	Std. Error	t-Statistic	Prob.
$\Delta HDI(-1)$	-0.2206	0.1286	-1.7148***	0.0998
$\Delta A2Bank$	-0.4504	0.0946	-4.7610*	0.0001
$\Delta A2Bank(-1)$	-0.3883	0.1344	-2.8883*	0.0083
$\Delta A2ATM$	0.0093	0.0025	3.7508*	0.0010
$\Delta A2ATM(-1)$	-0.0061	0.0022	-2.7729*	0.0108
$\Delta A2Credit$	0.0041	0.0017	2.3527**	0.0276
$\Delta A2Credit(-1)$	0.0053	0.0021	2.5228*	0.0190
ε_{t-1}	-0.3753	0.05673	-6.6157*	0.0000
R^2	0.6676			
Durbin-Watson stat	2.1177			

Note: *, ** and * indicates 1%, 5% and 10% significance level**

The long-run results (Panel A) indicate that, while access to bank and access to ATM has a significant positive effect on national development at the 5% and 1% level respectively, access to credit has a significant negative impact on national development at a 1% level. This implies that, for a percent increase in the level of access to bank and ATM (as measured by number of commercial bank branches and ATMs per 100,000 adults) it will lead to 43 percent and 1.87 percent in national development respectively. In addition, for a percent increase or decrease in access to credit (as measured by domestic credit to private sector) will lead to 1.43 decrease/increase in national development. Similarly, the short-run results (Panel B) demonstrates that the past year value of HDI (as a measure for national development), past and current year value of access to bank, and past year value of access to ATM has significant negative impact on

national development in the current period at the 10%, 1% and 5% level. Hence, a percent change in the past year value of HDI, access to bank and ATM and the current value of access to bank will result to 22%, 39%, 0.61%, and 45% decrease in the level of national development in Nigeria. Likewise, as a result of the significant positive impact on national at 1% and 5% levels, a percent increase in access to ATM in current period, and access to credit in current will lead to 0.93%, 0.41% and 0.53% increase in the level of national development in Nigeria. These findings corroborate with the discoveries of previous studies (see Van & Linh, 2019; Raichoudhury, 2016; Gul, Usman & Majeed, 2018). For instance, while Van and Linh (2019) discovered that access to bank and ATM and broad money has a significant and positive long-run impact on economic development, credit to private sector was observed to have a significant negative impact on economic development in Asian-Pacific countries. Similarly, Gul, Usman and Majeed (2018) discovered that bank account ownership, banks branch, number of Automated Teller Machine (ATM) and life insurance has positive effect on economic development of 185 countries.

The coefficient of the error correction term lagged by one period (ε_{t-1}) is negative, less than 1 and statistically significant, and therefore suggest that approximately 38% of the deviations or disequilibrium in national development will be corrected within one year.

Since, the ARDL bounds test estimated, a causality test was also conducted to ascertain the direction of the causality between the series. To this end, the Granger causality test was employed.

Table 6: Result of Granger Causality Test

Null Hypothesis:	Lags	F-Stat.	Prob.	Conclusion
<i>A2Bank</i> does not Cause <i>HDI</i>	2	2.49553	0.0989	Reject Null Hypothesis
<i>HDI</i> does not Cause <i>A2Bank</i>	2	2.54841	0.0945	Reject Null Hypothesis
<i>A2ATM</i> does not Cause <i>HDI</i>	2	3.16415	0.0566	Reject Null Hypothesis
<i>HDI</i> does not Cause <i>A2ATM</i>	2	2.99585	0.0651	Reject Null Hypothesis
<i>A2Credit</i> does not Cause <i>HDI</i>	2	0.15298	0.7505	Accept Null Hypothesis
<i>HDI</i> does not Cause <i>A2Credit</i>	2	1.18983	0.0045	Reject Null Hypothesis
<i>A2Credit</i> does not Cause <i>HDI</i>	2	0.28974	0.7505	Accept Null Hypothesis
<i>HDI</i> does not Cause <i>A2Credit</i>	2	6.45724	0.0045	Reject Null Hypothesis

The results presented in table 6 demonstrate the presence of bi-directional Granger causality between Access to the bank and national development at 10% level. Equally, the result

also suggests the existence of bi-directional Granger causality between access to ATM and national development at 10% and 5% level respectively, as well as a unidirectional Granger causality from National development to access to credit at 1% level.

5.0 CONCLUSION AND POLICY IMPLICATION

This study employs the ARDL bounds testing approach to investigate the effect of financial inclusion on national development in Nigeria during the 1980-2018 period. The result of the cointegration analysis indicates that financial inclusion (access to bank, ATM and credit) and national development (HDI – Human Development Index) have a long-run relationship. The results of analyses using the ARDL bounds testing techniques illustrate that financial inclusion (access to bank and ATM) has a significant and positive long-run effect on national development. In addition, the short-run ARDL result shows that, while access to ATM and credit and the past year value of credit have a significant and positive impact on national development, the one year past values of national development, access to bank and ATM, and access to bank in the current period have a significant negative effect on national development in the short-run. Furthermore, the result of Granger causality test illustrates that, while there exists a bi-directional causality between access to bank and ATM and national development, a unidirectional causality from national development to access to credit was observed.

The findings of this study, therefore, indicate that access to bank and access to ATM facility are the major elements of financial inclusion that induce national development in Nigeria in the long-run, while access to credit and access to ATM facilities are the main short-run elements of financial inclusion that induces national development. Based on these findings, this study recommends policies and actions that will see to the increase in the number of commercial and ATM/POS facilities across the country, specifically in rural areas, in other to improve the level of financial inclusiveness, and hence, national development. This is because access to banks and Automated teller machine discovered to have a positive significant effect on national development in the study period.

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