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Effect of Financial Inclusion on Economic Development in Nigeria

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ABSTRACT

This study examined financial inclusion on economic development in Nigeria. Specifically, this study was to examine the relationship between credit to private sector, number of bank branches per 100,000 adult, and economic development in Nigeria. The study was anchored on Financial Intermediation theory and Great Spurt theory. Data obtained from Central Bank of Nigeria (CBN) and World Bank Indicator and subjected them to Auto Regressive Conditional Heteroskedasticity (ARCH) technique to test the interaction between independent variables namely credit to private sector, number of bank branches per 100,000 adult, money supply and value of ATM/POS transactions with the dependent variable namely Human Development Index at 5% level of significance. The findings showed that financial inclusion in number of bank branches per 100,000 adult significantly explained the variation in Human Development Index in Nigeria but financial inclusion in credit to the Private Sector has no significant effect or variation in Human Development Index within the period under review in Nigeria. Hence, the study recommended among others that the government should ensure that the credit to the private sector should be channeled such that urban areas who are more of agricultural production and major instigator of industrial materials will help speed up swift economic development in Nigeria.

Keywords: Credit to private sector, number of bank branches and Economic development

INTRODUCTION

Economists have different opinions on the part of the fiscal sector on profitable development. While some prominent experimenters consider that the operation of the fiscal sector is simply a response to profitable development and acclimatize to varying demands from the real sector, others see it as a challenge that requires farther enhancement and therefore its significance may be exaggerated (Levine, 2006). Achieving absolute effectiveness in the fiscal sector conditioning bear an inclusive fiscal service, Hence, fiscal addition is an enabler of effective fiscal sector. One of the crucial objects of fiscal addition is to increase access to credit and other fiscal services, which can enable individualities and businesses to invest in their future, produce new enterprises, and grow their husbandry thereby leading to creation of new jobs, advanced income situations, and a more stable and prosperous frugality. fiscal addition helps increase the position of savings and reduce the reliance on informal sources. By furnishing a more accessible platform for savings, fiscal addition helps to encourage long term planning and increase fiscal stability.

The conception to fiscal addition was introduced in the early 2000s as a means of extending access to fiscal services to undeserved and barred population particularly in developing countries. The provocation for fiscal addition is designed at icing that all adult members of the society have easy access to expansive fiscal products, substantiated towards their requirements and handed at reasonable cost (Onaolapo, 2015).

Studies like Rajan and Zingales (2003), Levine and Zervos (1998) showed that access to fiscal services enhances profitable growth, tackles poverty, improves weal and general standard of living and astronomically promotes profitable development. Also, check of the part of savings in profitable development revealed that countries with advanced saving rates have the tendency to grow at a faster rate than the countries with low saving rates. Sarma and Pais (2010) linked the benefits of an inclusive fiscal system to include easing an effective allocation of coffers and a implicit reduction in the cost of capital; an enhancement in the day to day operation of fiscal coffers; and a reduction in the growth of informal sources of finance.

fiscal addition promotes the culture of saving and effective payment medium by strengthening the resource base of the fiscal institution which benefits the frugality to the extent that vacuity of coffers will bring about effective payment medium and allocation. It also mobilizes savings, promotes fiscal knowledge of the pastoral population and hence guides them to avoid the dubious and unconscionable rudiments that engage in unreliable fiscal services therefore perfecting their livelihoods. The contributory features of fiscal addition grease thriving profitable development.

Profitable development is the process by which a country or region gests sustained and inclusive profitable growth, performing in raised substance and well- being for its citizens. Profitable development generally involves a wide range of factors, including advancements in structure, increases in productivity and invention, access to education and training, and the development of a stable and dynamic business terrain. Profitable development is an important thing for countries and regions around the world, as it's frequently seen as a crucial motorist of mortal progress and well- being. A strong and

growing frugality can help to reduce poverty, increase access to education and healthcare, and produce new openings for individualities and businesses to thrive.

Multitudinous studies have been done on fiscal addition, but none has really touched the area of fiscal addition as it affects profitable development in Nigeria. For case Samuel (2018) examined the impact of fiscal addition on profitable growth in Nigeria; Abdullaihi (2017) studied fiscal addition and small and medium enterprises donation to sustainable profitable development in Nigeria; Oladimeji, & Adegbite, (2019) studied fiscal addition and profitable growth An empirical substantiation from Nigeria; Marcus, Nwosu, Godfrey & Patrick (2019) examined fiscal addition and profitable growth as it relates to Uganda; Mohammed (2022) studied New perceptivity into the impact of fiscal addition on profitable growth. None of them were suitable to look at the impact of fiscal addition on profitable development in Nigeria.

Hence, this study aims to address and contribute to the being literature on fiscal addition and profitable development in Nigeria by furnishing empirical substantiation of the relationship between fiscal addition and profitable development in Nigeria.

The broad objective of this study is to ascertain the effect of financial inclusion on economic development in Nigeria from 2005 to 2021. The specific objectives include;

1. To examine the impact of domestic credit to private sector on Human Development Index in Nigeria.
2. To assess the impact of the number of bank branches per 100,000 adults on Human Development Index.

REVIEW OF RELATED LITERATURE

Financial Inclusion

The traditional idea of fiscal addition is the provision of " access to and operation of " different, accessible, affordable fiscal services. Access to and use of fiscal services is one of the major motorists of profitable development. fiscal addition covers sustainable, applicable, cost effective and meaningful fiscal services for the financially underserved population. It connotes enabling access to fiscal coffers and services for different profitable agents at an affordable cost, especially to those with lower income. Fiscal addition strives to address and proffer results to the constraints that count people from sharing in the fiscal sector's conditioning. From theoretical literatures, it's also appertained to as' inclusive backing'.

CBN(2013) view fiscal addition to mean giving access to the hundreds of millions of men and women(each over the world) who are presently barred from fiscal services with provision of possibilities for the creation of a large repository of savings, investable finances, investment, and other profitable conditioning.

Fiscal addition is defined as a process or situation which allows for ease of access to, or vacuity of and operation of formal fiscal systems by members of the frugality. It describes a process where all members of the frugality don't have difficulty in opening bank account; Can go to pierce credit; and can accessibly, fluently and constantly use fiscal system products and installations without difficulty. It's the process which ensures that a person's in- coming plutocrat is maximized; out- going is controlled and can exercise informed choices through access to introductory fiscal services (PCC fiscal Addition Strategy, 2009).

Centre for fiscal Addition (2013) also described fiscal addition as a range of safe, accessible and meaningful affordable fiscal services to the vulnerable and other financially underserved population especially pastoral resides barred from the formal fiscal sector. It's also, on the other hand, about making a broader state in which all people who can use fiscal services have access to a complement of quality fiscal services.

FATF (2011) stated that fiscal addition is about furnishing access to an acceptable range of fiscal services available to individualities who presently only have access to introductory of fiscal services to the underserved and financially barred resides. World Bank (2012) described fiscal addition as the range, quality and vacuity fiscal services like savings, loans and insurance designed in a manner that's nicely fiscal.

The World Bank (2014) defined fiscal addition as the proportion of individualities and enterprises that use fiscal services, while the Asian Development Bank (2015) stated it as ready access for homes and enterprises to nicely priced fiscal services. Atkinson and Messy (2013) defined it as the process of promoting affordable, timely and acceptable access to a wide range of regulated fiscal products and services and broadening their use by all parts of society through the perpetration of acclimatized living and innovative approaches including fiscal mindfulness and education with a view to promote fiscal well- being as well as profitable and social addition.

The term fiscal addition generally implies availability to fiscal products and services by all. Hence, fiscal addition means that individualities and businesses have access to useful and affordable fiscal products and services that meet their requirements – deals, payments, savings, credit and insurance – delivered in a responsible and sustainable way. Introductory fiscal services make it easy to pay for day- to- day requirements, fund pretensions, and run a business. But over two billion grown-ups worldwide warrant access to essential fiscal tools. fiscal addition strategies aim to change that, and technology makes it possible to make an impact on a massive scale. Services range from introductory sale accounts like checking accounts and include fresh services like credit and insurance.

According to Schulman (2021), three essential aspects of ultramodern fiscal addition live, videlicet;

. Universal access to digital fiscal systems

2. safe-deposit box and secure deals that let consumers and businesses operate with confidence

3. Affordable participation in the frugality for all(make and accept payments, get loans, save for unborn pretensions, help the community, and further)

fiscal addition is a tool to induce plutocrat force in the frugality and to achieve inclusive growth through different schemes launched by government and its nonsupervisory agency like Central Bank of Nigeria so as to help poor get into the fiscal platform or marquee (Kaur & Abrol, 2018) **Relevance of Financial Inclusion**

The adding significance of fiscal addition as a catalyst for profitable growth and development has been well proved in the literature. fiscal addition is moment extensively considered as a right of all citizens to social addition, better quality of life and a tool for strengthening the profitable capacity and capabilities of the poor in a nation (Banco Central do Brazil, 2010). Policymakers have therefore, viewed fiscal addition as a introductory access for all citizens, pressing itsnon-excludability and also itsnon-rivalness. Considering that fiscal addition meets these two criteria, Mehrotra et al (2009), concluded that however, the degree of " publicness " in " fiscal addition " may be different from a typical public good like defence, but there should be no doubt that fiscal addition meets the two features of public good and therefore, can be regarded as a "quasi-public good ".

In that regard, fiscal rejection is the incapability of individual, ménage or group to pierce particularly the formal fiscal products and services. To Mohan (2006), fiscal rejection signifies lack of access by certain parts of the society to applicable low cost, fair and safe fiscal products and services from mainstream providers.

Though there may not have been a universal agreement over an exclusive list, it's extensively agreed that fiscal addition is multidimensional, encompassing access to, use of and capability in relation to a range of fiscal services.

According to the global fiscal addition normal, the number of grown-ups with access to fiscal services is lower than50.0 per cent. The problem is more acute in the developing and African countries in particular; similar that achieving a advanced fiscal addition position has come a global challenge (Ardic et al, 2011). The global target has been to remove all the walls, including education, gender, age, irregular income, regulation and geographical locales that have together contributed to the dearth of access to fiscal services by billions of grown-ups each over the world. Sanusi (2011) had attributed the rise in poverty position in Nigeria to the challenges of fiscal rejection. According to him, achieving optimal position of fiscal addition in Nigeria means empowering70.0 per cent of the population living below poverty position, and this would boost growth and development. Addition of this member of the society would induce multiple profitable conditioning, beget growth in public affair and ultimately reduce poverty.

Theoretically, lesser access to deposit installations enhances the capability of fiscal interposers to rally savings, while better access to finance facilitates profitable development by adding the capability of homes to take over productive investments (Andrianaivo & Kpodar, 2011). Chong and Chan (2010), noted further that access to a well- performing fiscal system, by creating equal openings, enables socially and economically barred people to integrate into the frugality and laboriously contribute to profitable development. This ensures that the fiscal system plays its part of inclusive growth which is one of the major challenges of arising and developing husbandry.

The consequence of fiscal rejection is to minimize the scale of profitable conditioning that can be financed and hence, limiting the capabilities for advanced profitable growth. fiscal addition requires that attention is given to mortal and institutional issues, similar as quality of access, affordability of products, provider sustainability, and outreach to the most barred populations. Fiscal addition guarantees bettered capability of poor people to save, adopt, and make payments throughout their continuance.

Piecemeal from the regular form of fiscal intermediation, fiscal addition takes care of

• Introductory no frills banking account for making and entering payments;

• Savings products suited to the pattern of cash overflows of a poor ménage;

• Plutocrat transfer installations; and

• Insurance (life andnon-life).

Effect of Digitizing in Financial Inclusion

Digitalization plays an important effect on fiscal addition by reaching people who are financially barred. Banks andnon-banks have begun to digitalize their fiscal services in order to offer further cost effective and more accessible services to their guests and unborn guests. The process of launching digital fiscal services like these has formerly begun in further than 80 countries. The result of this process, so far, is that people formerly without access to fiscal services, who only used cash- grounded deals now have access to digital services. With the use of cellphones, tasks like payments, transfers and much further can be managed in a more effective way(Digital Financial Addition, 2015). The rapid-fire increase in cell phone use can contribute to formally financially bar people being granted access to fiscal services and this also plays a part in the rise of branchless banking services in a country. Access to fiscal services through cell phones makes the vacuity for credit and deposits more fluently attained. This would in turn stimulate impulses for private investments made by people and therefore promote profitable growth (Andrianaivo & Kpodar, 2011). When initiating the process of digital fiscal addition, one of the most abecedarian factors is to make a well- performing digital platform for the guests and the redundant fiscal services that come with it, similar as credit, savings or insurance. This platform enables the guests to make deals and admit deals through the bank. It'll be penetrated through the guests digital bias similar as smartphones. The smartphone will be used as a link between the client and the bank that transmits information and at the

same time work as a point- of- deals outstation. The digital structure, bias and the redundant fiscal services are together one of numerous important factors that together constitutes digital fiscal addition. This addition comes with several benefits for the financially barred, not only does it bring access to formal fiscal services, but it also comes at a lower sale cost than the traditional fiscal services. It also reduces the pitfalls of loss for the client in terms of using cash- grounded payment styles like theft and other fiscal crimes. Everything comes with a threat, so does digital fiscal addition. One of the primary pitfalls that comes with digital fiscal addition is novelty pitfalls which principally is that the digital fiscal addition is novelty pitfalls which principally is that the client lacks knowledge about the products which can affect in getting scammed or indeed identity theft. Another threat that comes with it's the digital technology related threat. This brings the threat of services being disintegrated which can lead to data being lost (World Bank, 2018). Indeed though the development of the banking system may affect in advanced fiscal addition in the long- run, its metamorphosis to a system that's further cell phone driven by the use of for illustration credit/ debit cards, online banking, ATMs and mobile plutocrat, could affect it negatively in the short- run. The negative effect is grounded on the fact that not everybody, especially the low- income population or senior, have access to the technology that's demanded and that's why some part of the population may be still barred(Mehta & Shah, 2014). Fiscal addition is concerned with the entire fiscal service and not just the banking sub-sector. It involves the other services like collective finances, insurance, credit services, fiscal requests etc. and as similar policy makers should strive to attack critical inclusive strategies in the Nigerian frugality.

Economic development

Profitable development refers to the sustained and deliberate trouble to ameliorate the standard of living of a country's citizens by adding profitable exertion and creating openings for growth. Profitable development can take colorful forms, including the development of structure, diversification of the frugality, enhancement of mortal capital, and creation of entrepreneurship and invention. Profitable development is a byproduct of MDGs. The Millennium Development Goals(MDGs) were a set of eight transnational development pretensions set by the United Nations in 2000 with a target completion date of 2015. The MDGs were designed to address a range of development challenges, including poverty, hunger, complaint, gender inequality, and lack of access to education and health services. One of the crucial pretensions of the MDGs was to promote profitable growth and development, and to reduce poverty and inequality. The MDGs honored that profitable development was a pivotal factor in perfecting the lives of people, and that promoting profitable growth was essential to achieving other development pretensions.

While profitable development wasn't explicitly defined as a thing of the MDGs, it was seen as a by- product of the other pretensions, as profitable growth and increased income situations can help to reduce poverty, ameliorate access to health and education services, and increase the standard of living for individualities and communities. Profitable development is essential for a country's progress and substance. It enables a country to induce wealth, reduce poverty, and ameliorate the quality of life of its citizens. One of the crucial motorists of profitable development is investment in structure. Good structure, similar as roads, anchorages, and airfields, is essential for profitable growth as it facilitates the movement of goods and people, reduces the cost of doing business, and attracts foreign investment.

Historically, Nigeria's frugality was dominated by husbandry, but this has changed over the times with the discovery of oil painting in the Niger Delta region. The oil painting assiduity has since come the dependence of the frugality, counting for over 90 of Nigeria's import earnings and about 70 of government profit. This over-reliance on oil painting has created significant challenges for Nigeria's profitable development. One of the major challenges facing Nigeria's profitable development is poverty. Despite being an oil painting-rich country, Nigeria has one of the loftiest poverty rates in the world, with over 40 of the population living below the poverty line. This is due to a combination of factors similar as corruption, poor governance, lack of structure, and limited access to education and healthcare. These factors have also led to high situations of severance, particularly among youthful people, who make up a significant proportion of the population. To address these challenges, the Nigerian government has enforced several profitable development programs over the times. One of these programs is the National Economic commission and Development Strategy (requirements), which was launched in 2004. The policy aimed to diversify the frugality, reduce poverty, and promote sustainable profitable growth. The government has also enforced several other enterprise, including the Agricultural Transformation Agenda, the You Win program, and the Presidential Enabling Business Environment Council (PEBEC).

Nigeria's profitable development trip has been grueling, but there are also openings for growth and progress. The country needs to apply the right programs and strategies, influence its strengths, and address its sins to accelerate its profitable development. With the right approach, Nigeria can come a prosperous and vibrant frugality that benefits all its citizens.

Profitable development is an ideal of fiscal addition which includes political, profitable and social addition(Nalin & Mariappan, 2012). Rejection of a person or group of people from these three confines of addition will lead to fiscal rejection because the three confines are needed to attain fiscal addition. Where maturity is barred from the fiscal system the gain of profitable development doesn't reach every one and this leads to inequality.

Financial Exclusion is the direct contrary of fiscal addition. It began from social rejection policy. In a bare concrete term, Sinclair (2011) defines fiscal rejection as the incapability to pierce necessary fiscal services in an applicable form as a result of difficulties with access, conditions, prices or marketing or side rejection in response to negative perception or experience.

Poverty eradication can be achieved when further emphasis is laid on inclusive backing. Every time, millions of people around the world are transition out of poverty in any number of ways by espousing newer husbandry technologies, investing in new business openings or chancing new jobs. At the same time, large figures fall back into poverty due to health problems, natural disasters, fiscal reversal and other issues. However, it'll go a long way to annihilate poverty, If maturity of those living in near poverty can pierce especially on insurance policy that ensure against similar unlooked-for circumstance. Also

if there's an advanced increase in the per capita income, gross domestic product(GDP), all these attributes to the position of growth and development an frugality has achieved and can also enable it grow and sustain fiscal addition. **Empirical Framework**

The study looking at the empirical review in line with examining the effect of fiscal addition on profitable development reviewed the following exploration workshop and is shown in this section. For case, Emmanuel and M-Ember (2022) examined whether fiscal addition had any impact on sustainable profitable development in Nigeria. Using the Precise system of moment(GMM) and HDI marketable bank deposit, Number of marketable bank branches, affectation, loan to pastoral areas as delegates for fiscal addition, concluded that there's no significant relationship between fiscal addition and profitable development. Okonkwo and Nwanna(2021) in their study on Financial addition and profitable growth in Nigeria using the Retrogression model, concluded that currency in rotation has an insignificantly positive relationship as well as unproductive effect on profitable growth in Nigeria likewise loans extended by pastoral branches have a positive and significant effect on profitable growth in Nigeria and deposit of pastoral branches have a positive relationship though not Significant. Joseph and Chioma (2020) examined the relationship between fiscal addition and profitable growth in Nigeria. They espoused the accumulative distributed pause model (ARDL) and concluded that the fiscal system is a positive function of profitable growth. Udoka and Anyinyang (2012) conducted a exploration on fiscal addition by examining the goods of interest rate changes on profitable growth in Nigeria using periodic data over the period 1970- 2012. Employing the fashion of Ordinary least places(OLS) logical fashion, they set up out a significant negative effect of interest rate on profitable growth. They also set up substantiation of the frugality in pre and post reforms period. Sarma (2012) estimated the fiscal addition for 94 countries across the world between 2004 and 2010 using indicator of fiscal addition (IFI) approach which he constructed in line with UNDD within the 94 countries of study. Veritably many African were in the list, though his choice of country was grounded on data vacuity in fiscal access check (FAS) data base of IMF. Findings in the study indicates that in the time 2009, out of 91 countries eventually measured, Chad with IFI value as low as0.016 was the smallest financially inclusive country while Cypress with IFI value of0.996 ranked loftiest as the most financially inclusive. Also in 2010, Afghanistan ranked smallest with IFI value of0.052 while Luxembourg with IFI value of0.996 ranked loftiest. The study concludes from his findings, that different countries around the world are at different situations of fiscal addition and rejection. He recommended that the use of multidimensional approach to cover the position of fiscal addition and rejection since it's a good index of profitable growth. Onaolapo and Odetayo (2012) in their own study of fiscal addition and micro finance banks in Nigeria expose that access to finance via micro finance strategy especially by poor and vulnerable groups is prerequisite for poverty relief, employment creation, social cohesion and overall profitable development for the Nigerian frugality. Using check approach in their study, their findings also shows that the commonest reasons for saving with micro finance banks in Nigeria were consumption, investment in Education and to start a business; whereas those with better education save further plutocrat for investment than lower educated bones . Ibeachu (2010) conducted a relative analysis on fiscal addition using a case study of Nigeria and the United Kingdom; he employed a deducible approach to measure fiscal addition, availability and quality of bank services in Nigeria by assaying responses from the check questionnaires administered. The study showed fiscal addition as a growth strategy for banking institutions; from his findings he concluded that fiscal addition (FI) was further request driven in terms of consumer geste and client satisfaction when offering fiscal services.

METHODOLOGY

Research design refers to the overall strategy used to integrate the different factors of the study in a coherent and logical way, thereby effectively address the exploration problem. It constitutes the design for the collection; dimension and analysis of data demanded for probing the relationship between variables. Therefore, insure that the substantiation attained enables you to adequately attack the exploration problem unambiguously and nicely(www.wikipedia.com).

This study adopts the *Ex-Post Facto* design which showed that the study deals with data that are formerly in actuality and the experimenters cannot manipulate its ' outgrowth. The data for this exploration was attained substantially from secondary sources; particularly from the colorful publications of the Central Bank of Nigeria (CBN) statistical bulletins, World Bank pointers and other applicable journals.

Model Specification and Validity

The study looked at the effect of financial inclusion on economic development. The study employed multiple regression techniques ascertain the effect of independent components on the dependent variable in the study. The study adapted and modified the model used by Emmanuel and M-Ember (2022) and their model is stated thus;

$HDI_t = a_o + a_1 CDB_t + a_2NCBB_t + a_3Gini + a_4INF_t + a_5LRA_t + \mu_t$

However, our model for the study is stated thus

HDI = f(CPS, CBB, M2, ATM/POS)

Hence, the functional model of the study is stated thus;

HDI = f(CPS, CBB, M2, ATM/POS)

This can be mathematically expressed as;

$HDI = a_0 + b_1CPS_{t-1} + b_2CBB + b_3M2 + b_4ATM/POS + e$..1

Where:

HDI= Economic development Variable

CPS, CBB = Financial Inclusion Variables

B0=Constant Term

B1=Co-efficient of X1

U= Error term.

HDI= Human Development Index

CPS = Domestic credit to private sector (X1)

CBB=Number of Bank Branches(X1)

Description of Variables

Credit to private sector: Refers to loans, advances, or credit facilities provided by financial institutions to individuals, corporations, and other entities in the private sector, with the aim of supporting their investments and business activities.

Number of bank branches: Refers to the physical locations of banks, where customers can perform various financial transactions and receive services such as deposits, withdrawals, loans, and investment advice.

Economic development: Refers to economic growth that is sustained overtime and meets the needs of the present without compromising the ability of future generations to meet their own needs. It involves balancing economic, social, and environmental considerations to ensure long-term prosperity and well-being.

Human Development Index (HDI): A composite statistic of life expectancy, education, and precipitating come indicators, which is used to rank countries into four tiers of human development.

Methods of Data Presentation and Analysis

The study adopted the analytical method of Data Analysis. The tool used multiple regression technique. The econometric view statistical software version 12.0 was used in testing the hypotheses. The regression analysis was employed to decide whether or not financial inclusion had a significant impact on the economic development in Nigeria. These included the Z-statistics, the Co-efficient of Determination (R2) and adjusted R2, and also the F-test.

The evaluation of estimates deals with how the study interpreted the results of the analysis in the study. Basically, the co-efficient (R2) is gotten from the relation below:

Where:

r= Co-efficient of correlation

n= no of time period

X= Value of the Independent Variable

Y= Values of the economic development measures.

The 'r' shows the pattern of the relationship between economic growth and financial inclusion variable. A positive 'r' shows a negative or an inverse relationship between economic growth and financial inclusion. A relationship (Z Significance) below 0.005 shows significance, while above 0.05 shows insignificance. The co-efficient of determination 'R2' is shown as 'r2' multiplied by 100. This reveals the percentage change in one variable as a result of a percentage change in another variable. Therefore, the co-efficient of determination indicates the extent of the instability in each of the major economic development measures.

ANALYSIS OF DATA

Descriptive Statistics and Test for Normality

The study will do descriptive statistics using the Jarque-Bera Normality test, which requires that for a series to be normally distributed; the histogram should be bell-shaped and the Jarque-Bera statistics would not be significant. This implies that the p-value given at the bottom of the normality test table should be greater than the chosen level of significance to accept the Null hypothesis, that the series is normally distributed (Brooks, 2014).

Table 1: Descriptive Statistics

	CPS	CBB	HDI
Mean	15447.48	5.161765	0.508118
Median	14461.41	4.980000	0.519000
Maximum	32868.49	6.560000	0.539000

Minimum	1838.390	3.780000	0.465000
Std. Dev.	9307.071	0.933878	0.025850
Skewness	0.193885	0.226066	-0.258535
Kurtosis	2.060110	1.571400	1.503825
Jarque-Bera	0.732246	1.590436	1.775012
Probability	0.693418	0.451483	0.411681
Sum	262607.2	87.75000	8.638000
Sum Sq. Dev.	1.39E+09	13.95405	0.010692
Observations	17	17	17

Source: Computation by author using E-view 12.0

From table 1, the aggregative averages like mean, median and mode for all the observations maintain high averages. The spread and variations in the series are also indicated using the standard deviation which is minimal. Significantly, kurtosis which shows the degree of peakedness is also shown together with the skewness which is a reflection of the degree of or departure from symmetry of the given series. With all the variables showing an average kurtosis less than 3, there is evidence that they are all leptokurtic with all the variables showing Jarque-Bera statistics of p-values in above the 5% level of significance.

Diagnostic Tests

This study embarked on diagnostic tests to ensure that our data and model used in this research work conform to the basic assumptions of the classical linear regression which will ensure that the output of this process is not error-prone and is reliable.

Test of Hypotheses

Hypothesis One

Ho_1: Domestic Credit to Private Sector have no significant impact on Human Development Index in Nigeria.

H_1: Domestic Credit to Private Sector have a significant impact on Human Development Index in Nigeria.

Table 2: ARCH Regression Result – Model 1

Dependent Variable: HDI
Method: ML ARCH - Normal distribution (BFGS / Marquardt steps)
Date: 04/21/23 Time: 11:55
Sample: 2005 2021
Included observations: 17
Failure to improve likelihood (non-zero gradients) after 13 iterations
Coefficient covariance computed using outer product of gradients
Presample variance: backcast (parameter = 0.7)
GARCH = C(5) + C(6)*RESID(-1)^2 + C(7)*GARCH(-1)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
CPS	-3.20E-05	2.24E-05	-1.431070	0.1524
CBB	0.072969	0.006134	11.89563	0.0000

Source: Computation by author using E-view 12.0

The result from the individual effect of LPS on economic development proxy by Human Development Index (HDI) showed z-statistics of -1.431070 with probability value of 0.1524 which is not significant at 5% significance level. This is due to the p-value of 0.1524 which is greater than the 0.05 level of significance. Thus, affirming that the domestic credit to private sector within Nigeria does not affect economic development significantly and an increase in domestic credit to the private sector will cause a negative decrease on the Nigerian economic development to improve by 0.0000320%. Hence, the null hypothesis that Domestic Credit to Private Sector have no significant impact on Human Development Index in Nigeria is accepted while rejecting the alternative hypothesis.

Hypothesis two

Ho_2: Number of bank branches per 100000 adults have no significant impact on Human Development Index in Nigeria.

Ho_2: Number of bank branches per 100000 adults have a significant impact on Human Development Index in Nigeria.

Table 3: ARCH Regression Result – Model 2

Dependent Variable: HDI
Method: ML ARCH - Normal distribution (BFGS / Marquardt steps)

Date: 04/21/23 Time: 11:55
Sample: 2005 2021
Included observations: 17
Failure to improve likelihood (non-zero gradients) after 13 iterations
Coefficient covariance computed using outer product of gradients
Presample variance: backcast (parameter = 0.7)
GARCH = C(5) + C(6)*RESID(-1)^2 + C(7)*GARCH(-1)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
LPS	-3.20E-05	2.24E-05	-1.431070	0.1524
CBB	0.072969	0.006134	11.89563	0.0000

Source: Computation by author using E-view 12.0

The result from the individual effect of CBB on economic development proxy by Human Development Index (HDI) showed z-statistics of 11.89563 with probability value of 0.0000 which is significant at 5% significance level. This is due to the p-value of 0.000 which is less than the 0.05 level of significance. Thus, affirming that the number of bank branches per 100,000 per adult affect economic development significantly and an increase in the number of bank branches per 100,000 per adult will cause a positive increase on the Nigerian economic development to improve by 7.2969%. Hence, the null hypothesis that the number of bank branches per 100,000 per adult has no significant impact on Human Development Index in Nigeria is rejected while accepting the alternative hypothesis.

DISCUSSION AND CONCLUSION

This study examined the effect of financial inclusion on economic development in Nigeria from 2005 to 2021 with the intention of determining how financial inclusion affects economic development in Nigeria. In line with a detail theoretical review and empirical analyses, findings were made addressing the research questions posted as well as set and tested hypotheses. The study employed four models and used diagnostics tests namely – Unit root test and descriptive statistics and ARCH regression analysis and analyze the data represented in table 4.1; and the subsequent tests results in tables 4.2 to table 4.5. The findings are hereby discussed below in line with the objectives of this study.

The result of the ARCH regression analysis revealed that the domestic credit to private sector within Nigeria does not affect economic development significantly and an increase in domestic credit to the private sector will cause a negative decrease on the Nigerian economic development to improve by 0.0000320%. This showed that an increase in the credit to the private sector had negative effect on human development index in Nigeria. The result of this study is supported by the findings of Ndu and William (2022) who discovered that the impact of financial inclusion is very weak in Nigeria. Okonkwo and Nwanna (2021) further stressed the position of the findings when they discovered that financial inclusion had insignificant relationship with economic growth in Nigeria. Another supporting literature is the work of Emmanuel and Grenah (2022) who also affirm that there is no significant relationship between financial inclusion and economic development. This result contradicted our theory, the financial intermediation theory and great spurt theory on financial inclusion, an affirming that the domestic credit to private sector within Nigeria does not affect economic development significantly and an increase in domestic credit to the private sector will cause a negative decrease on the Nigerian economic development to improve by 0.0000320%.d our apriori expectations of a positive effect is contradicted. The implication of this result is that the credit to the private sector had over time been ineffective and negatively affected economic development in Nigeria.

The result of the ARCH regression analysis revealed that the number of bank branches per 100,000 adults affects economic development significantly and an increase in the number of bank branches per 100,000 per adult will cause a positive increase on the Nigerian economic development to improve by 7.2969%. This showed that an increase in the number of bank branches per 100,000 adults had positive effect on human development index in Nigeria. The result of this study is supported by the findings of Adediran and Okolo (2019) that financial inclusion has a positive impact on economic development. Clodoaldo and Elmotambosi (2021) further stressed the positive relationship between financial inclusion and economic development. Another supporting literature is the work of Mohammed and Abdulganiyu (2019) who also affirmed that there is a strong and positive relationship between financial inclusion and economic development. This result accepts our theory, the financial intermediation theory and great spurt theory on financial inclusion, affirming that the number of bank branches per 100,000 adults within Nigeria affects economic development significantly and an increase in the number of bank branches per 100,000 adults will cause a positive increase on the Nigerian economic development to improve by 7.2969%. Our apriori expectations of a positive effect are accepted.

The implication of this result is that the number of bank branches per 100,000 adults had over time been effective and positively affected economic development in Nigeria.

In line with the objectives of this study, the following recommendations are made:

1. The fiscal addition via credit to the private sector should be conducted similar that civic areas who are further of agrarian yield and major agitator of artificial accoutrements will help speed up nippy profitable development in Nigeria. The preface dealer plutocrat will stimulate this achievement if designedly covered and administered in Nigeria.

2. The number of bank branches per 100,000 grown-ups should further be boosted with fiscal technology factors to apply reach and encourage further conditioning via mobile sale, CARD/ ATM/ POS deals and also dictate strict operation of technological services of banks to reduce cost of cash operation and mortal error essential in service delivery therefore adding service delivery, return on means of the fiscal institutions and profitable development of Nigeria.

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