Determinant of Financial Inclusion in Nigeria. An Empirical Issue.

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ABSTRACT: From 2005 to 2019, this study looked at the factors that influence financial inclusion in Nigeria. GDP per capita income, domestic credit to the private sector (percent of GDP), broad money supply (percent of GDP), number of commercial bank networks, and age dependency ratio were all suggested as determinants of financial inclusion in the model, with deposit interest rate and inflation rate controlled for. The study's data came from the World Bank Data (2019), the International Monetary Fund report (2019), and the Central Bank of Nigeria Statistical Bulletin (2019), with the data being estimated using the ordinary least square approach using Economic Views version 9.0. The study found that gross domestic product per capita, domestic credit to the private sector (percentage of GDP), and inflation rate have statistically insignificant beneficial effects on financial inclusion. This position implies that financial inclusion in Nigeria is limited. However, broad money supply (percent of GDP) and deposit interest rate have a statistically negligible negative impact. As a result, the study suggests that the only remaining drivers of financial inclusion in Nigeria are the broad money supply (percentage of GDP) and deposit interest rate. In light of this, we recommend that all deposit money banks make their products and services appealing, as this will encourage the Nigerian people to save more.

Keywords: Determinants, Financial Inclusion, Deposit Interest Rate, Inflation rate, Nigeria.

1. Introduction

Financial inclusion has gained international attention in the fields of development finance and economics throughout the years. This is because the level of a country's financial inclusion determines its ability to generate economic growth, development, and sustainability. Because millions of people throughout the world are financially unable to use formal financial institutions, there is a risk of losing deposits or savings, as well as investable capital, and the global economy's ability to build wealth. Indeed, it is commonly acknowledged that access to financial services can promote credit creation and capital accumulation, hence increasing investment and economic activity (Wokabi&Fatoki, 2019).

Financial inclusion, according to Nwidobie (2019), "incorporates" previously excluded economic agents (individuals and small firms) into the GDP "basket." The identification and incorporation of economic units in the informal financial sector into the formal financial sector, as well as the supply of financial empowerment to them, boosts production, employment, income, and economic growth. The removal of some economic units from the formal financial system, on the other hand, prevented their contribution to economic growth from being measured. This implies that as more economic agents become financially integrated into an economic system, the amount of investment in productive or real economic activities will rise, leading to higher levels of national production, national income, and, by extension, economic growth and development. An economy may be sustained if all economic agents participate in productive activity.

The development of country-specific and cross-country indicators is also documented in financial literature (see Allen, Carletti, Cull, Jun, & Valenzuela, 2016; Zins, Weill, 2016; Goel and Sharma, 2017; Asif, 2018; Okoroafor, Adeniji, & Awe, 2018). Beck and Torre were among the first to create a financial inclusion index (2006). Camara and Tuesta (2017) divided drivers of financial inclusion into demand-side and supply-side elements using deposits, payments, and loans (access, eligibility, and affordability). Number of accounts, loan volumes to customers, ATM numbers, access to Webpay and other internet banking, and factors inhibiting voluntary inclusion (distance and lack of necessary documentation, lack of trust in the country's financial system, and affordability) are all supply-side factors that encourage the use of financial services.

According to Nwidobie (2019), Nigeria, because of its diverse development across states and geopolitical zones, requires a multivariate financial inclusion index to reflect the country's various levels and states of financial penetration. As a result, identifying these indices will assist development planners in formulating effective policies aimed at boosting economic development through increased financial inclusion. In other words, it will be an efficient means of transmitting central bank and deposit money bank (DMB) financial inclusion programs, resulting in improved financial education, access to formal credit, and higher economic productivity and growth.

A thorough review of prior empirical studies found that there has been a significant amount of academic research on financial inclusion in industrialized, emerging, and underdeveloped nations. However, the majority of these studies concentrated on cross-country comparisons. A fundamental flaw in cross-country analysis studies is that they frequently omit country-specific details that could guide policy toward the best possible outcomes. Furthermore, the majority of studies have linked financial inclusion to economic growth, while others have concentrated on its contribution to microfinance institutions, with little or no attention paid to the factors that define financial inclusion. This research looks on the elements that influence financial inclusion in Nigeria in order to address these troubling challenges.

- 2. Literature Review
- 2.1 Conceptual Review
- 2.2 Concept of Financial Inclusion

When it was discovered that over 7 million people in the United Kingdom did not have a bank account, the term "financial inclusion" was coined. Despite later attempts by researchers to provide a comprehensive explanation of the constructions, there is no universally accepted description of the construct. This could be due to the construct's multifaceted character. That is, the context in which it is being used, as well as the geographical location and, most likely, the stage of economic development of the area in question. Scholars have proposed many definitions of financial inclusion that are limited to the three elements of financial inclusion: financial assessment, usage, and quality. Demirguc-Kunt and Klapper (2015), for example, defined financial inclusion as the ability to obtain basic financial services. Financial inclusion, according to Sarma (2012), is defined as the process of ensuring that all members of the economy have easy access to, and use of, the formal financial system. According to Gupte, Venkataramani, and Gupta, these definitions undervalue the relevance of other aspects of financial inclusion, such as usage and quality (2012).

Financial inclusion, once again, refers to unrestricted and easy access to financial services at reasonable prices (Cnaan, Handy &Moodithaya, 2012). It is thus an intervention approach aimed at removing market friction that prevents markets from working in the poor and underprivileged's favor, ((Aduda&Kalunda, 2012). Financial exclusion, on the other hand, encompasses not just physical access due to financial service providers' shortcomings, but also the users of financial services. Katoroogo confirmed this definition (2016). Financial inclusion is defined by the provision of a broad range of high-quality financial products, such as savings, credit insurance, payments, and pensions, that are relevant, appropriate, and affordable for the entire adult population, particularly the low-income segment of the economy (EFIA, 2018).

Based on the foregoing, it is striking to note that, despite the various viewpoints expressed by the various scholars cited above, all scholars agree that financial inclusion is the inclusion of individuals with the desired outcome of the marginalized in society being able to access financial services at an affordable rate, thereby reducing the effects of poverty. Again, the study uses Agyekum (2017)'s definition as a reference because it is all-encompassing and covers all three elements of financial inclusion.

2.1.2. Benefits/Challenges Facing Financial Inclusion in Nigeria

The importance of financial inclusion in helping low-income people in developing nations like Nigeria to alter their lives cannot be overstated. To further on this point, Ansaful (2019) stated that in order for an individual to reap the benefits of financial services, the products must be easily accessible, of high quality, and relevant to their needs. They went on to say that access to the use of formal financial services like as credit, savings, insurance, and payment facilities are key to increasing family and individual consumption, as well as investment against the risks and adversities that the low-income group faces.

Onalapo (2015) detailed the advantages of applying a progressive "hierarchal financial inclusion" to a typical Nigerian retail business:

- i. The retailer should create a bank account in his neighborhood and receive a prepaid card from an ATM Point of Sale (POS).
- ii. The shopkeeper uses his prepaid card to pay all store invoices on a regular basis and receives money at the POS terminal.
- iii. Because of the prepaid card's convenience, the shopkeeper begins to use it for additional personal transactions.
- iv. The Nigerian Central Bank announces a loan facility through the Small and Medium Enterprise Development Association (SMEDAN), of which the shop is a member.
- v. The retailer, through his bank, applies for the loan based on his transaction history (bank account turnover) and credit worthiness.
- vi. The concessionary loan allows the retailer to develop his business, resulting in increased revenue. As a result, he begins to invest more, build his savings, and possibly create an investment account.
- vii. The retailer is now able to get life insurance to protect his family's financial future.

In particular, the Central Bank of Nigeria (CBN) identified the following hurdles to financial inclusion in Nigeria in an occasional paper published in 2013:

- i. The lack of financial expertise among this segment of Nigerian population due to the general low level of financial literacy is a major barrier in the financial inclusion process. The majority of Nigeria's estimated 40 million financially excluded residents are uninformed of the services and benefits provided through financial services, and service providers' workers typically lack adequate knowledge of the services and hence are unable to educate them effectively.
- ii. Another major challenge, especially from the part of growing savings is the inability of the populace to save a result of double digit inflation in the economy, with its attendant effects on real interest rate and continuous loss of money value.
- iii. There's also the issue of rising poverty levels. Despite the economy growing at an average of 7.0 percent between 2009 and 2011, unemployment continues to rise, and progress on several of the Millennium Development Goals to reduce poverty has been modest.

2.1.3. Policy Responses towards Financial Inclusion in Nigeria

The Agricultural Credit Support Scheme (ACSS) was founded by the CBN in 1988, and it was one of the earliest attempts to provide loans to practicing farmers and agro-allied companies. Small-scale farmers are urged to approach their bank for loans, although large-scale farmers are permitted to apply directly to the bank under the scheme's requirements (CBN, 2013). Farmers and agro-allied entrepreneurs can get financial help with a single-digit interest rate of 8.0 percent under the scheme. For example, banks grant loans to qualifying applicants at a 14.0 percent interest rate, with a 6.0 percent rebate for timely repayment in a future application, lowering the effective rate of interest paid by farmers to 8.0 percent and providing a mechanism of influencing financial inclusion (CBN, 2013).

In Nigeria, recent reform efforts have resulted in community banks being repackaged as microfinance organizations and commercial banks being restructured into universal and regional categories. In addition, the establishment of a framework for mobile services in 2009 represented a crucial turning point in Nigeria's financial inclusion policies. Following measures such as the amended Microfinance bank rules and recommendations on non-interest-window in 2011, the National financial inclusion was established.

A new regime for Tiered Know Your Customer, Bank Charges, and Regulation of Agent Banking Relationships was recently enacted as part of policies aimed at improving the supply of financial services. Literature has also provided us with numerous suggestions for bridging the gap between those who are financially excluded and those who are financially included. Some of these recommendations, which were presented as models, aimed to clearly define the causes of financial exclusion as well as ways to be used to bring the poor and unbanked into full financial inclusion. One of these models is Porteous&Zollman's (2016) sustainable financial model, which defined three essential propositions for developing a long-term sustainable inclusion within an economy: customers' requirements proposal, business' case proposition, and a compliant ecosystem. Other options are listed below:

Figure 2.1: Social Development Financial Inclusion Model

Need Social Devt.	Need Access to Financial Access
Govt Grant	Micro Credit/financial Insurance
Employment Scheme	Multiple Product Delivery Platform
Social Benefits	Banking Transactions
[Health/Edu]	



Source: Adopted from the works of Onalapo (2015)

2.1.6. Financial Inclusion Index Computation

The below unified model is presented below:

Author	Name of Index	Formula
Sarma (2008)	Index of Financial inclusion	Formula 1: $\frac{IFI = 1 - \sqrt{(1 - pi)^2 + (1 - ai)^2 + (1 - ui)^2}}{3}$
Sarma (2010)	Index of Financial inclusion	Formula 2: $\frac{IFI = 1 - \sqrt{(1 - pi)^2 + (0.5 - ai)^2 + (0.5 - ui)^2}}{3}$
Kumar & Mishra (2009)	Financial inclusion index (FII) for banking	$FII^{B} = (\underline{\sum q^{1}q^{1}})$ 3
	Financial inclusion index (FII) for formal sector	$\frac{\mathrm{FII}_{\mathrm{B}}^{\mathrm{H}} = (\underline{\sum} \mathbf{q}^{\mathrm{xtqs}})}{3}$

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	Financial inclusion index (FII) for informal sector	$FII_{I}^{H} = (\underline{\sum} q^{xtqs})$ 3
Arora (2010)	Financial access Index (FAI)	$FAI = Di^{I*}\underline{wi}$ $Di^{II*} wii * Di^{III* wiii}$
Gupte, et al (2012)	Financial inclusion index (FII)	$FII = D1^{1/5}. D2^{1/5}. D3A^{1/5}. D3B^{1/5}. D4^{1/5}$
Prahab (2011)	Financial inclusion index (FI Index)	$\sum_{n=1}^{n} X = \sum (a1 * 5)(b * 5)(c * 5)(d * 30)(e * 10)(f) \\ * 10)(g * 10)(h * 10)(i * 10)j * 10)$

 Table 2: Summary of Stuides Associated with financial inclusion index

Source: Researcher's Compilation Based on Extant Studies.

2.2. Theoretical Underpinning

The study used an interdisciplinary approach. Given the interdisciplinary nature of financial inclusion, there are a variety of ways that can be used to comprehend this topic. Institutional theory primarily aims to address the most complex and resilient aspects of how institutions are formed, sustained, modified, and dismantled (Scott, 2004). The current study is concerned with the financial system's continuing influence on institutions. This encompasses the elements that affect financial inclusion, such as how structures (such as rules, routines, and norms) guide social behavior. It's worth noting that financial inclusion based on institutional theory is more of a broad theory spanning economics, politics, and sociology (Scott, 2001) than a theory unique to finance. As a result, this study would claim that one of the characteristics linked with financial inclusion is the financial system, as defined by institutional theory. Financial inclusion is shaped by a certain financial system, which is impacted by institutional pillars (i.e., regulatory/coercive, normative, and mimetic aspects) as well as economic considerations.

2.3. Empirical Studies

The growing interest on determinants of financial inclusion has given birth to some empirical studies on the subject matter. They are summarized below;

Table 1:	Summary	of	Webometrics	Analysis
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Author's Name	Title	Scope	Methodology	Findings
Asif, R. (2018)	Determinants of financial Inclusion in High Income and Low income Countires	2015 - 2017	Panel Data	The results affirms that financial exclusion is indeed a reaction of social exclusion, as countries having low GDP per capita, low urbanization, less enforcement of law, higher age dependency ratio and poor connectivity seem to be less financially inclusive.

Ong'eta, J.O (2019)	Determinants of Financial Inclusion: A Literature Review	2019	Content Study	Sequel to extant empirical studies, the researcher deduced the following as factors which affect financial inclusion: 1. The demand, supply and other related factors affect financial inclusion.
Okoroafor O.K, Adeniji, S.O., & Awe, E. (2018)	Empirical Analysis of the Determinants of financial inclusion in Nigeria: 1990- 2016.	1990 to 2016	Error Correlation Model (ECM)	The estimated results revealed positive and significant relationship between the financial inclusion and GDP per capita, money supply, Credit to small and medium scale enterprises, and number of internet users.
Lotto, J. (2018)	Examination of the studies of financial inclusion and its Determinants in Tanzania	The study covers 1800 respondent across Mainland Tanzania between 14 and 26 September 2016	OLS estimation	The finding of this paper reveal that gender, education, age and income are the pertinent factors which affect the financial inclusion in Tazania.
Mutua, P.N (2018)	The effects of financial inclusion in East Africa.	2008 to 2017	Multiple Regression	On the overall, the results revealed that financial innovation is a strong determinant of financial inclusion.
Wokabi, V.A., &Fatoki, I.O (2019)	Determinants of Financial Inclusion in East Africa	 The geographical scope of the study centered on Kenya, Uganda, Tanzania, Rwanda and Burundi. The study period spanned form 2000 to 2016 	Multiple Regression	 The study found that: Rural population and income are significant determinants of financial inclusion with rural population being negatively related with financial inclusion. Unemployment though statistically insignificant had a negative relationship with financial inclusion.
Otiwu, K.C., Okere, P.A, Uzowuru, L.U, Ozuzu, P.N. (2018)	Financial Inclusion and economic Growth of Nigeria (The Microfinance Option).	1992 to 2013	OLS Estimation	The study reveals that the growth and development of a nation is significantly dependent on the expansion of banking and financial services to the currently, as they possess untapped and unexplored valuable potentials that will be of tremendous to the county.

Source: Webometrics Analysis (2021)

3. Methodology

The study adopted the ex-post facto research design. In this research work, the sample studied from 2005 – 2019 is duration of the sample of the Number of bank branches per 1,000km², Number of banks ATMs per 1,000 Adults, Outstanding savings (% of GDP), Outstanding loans (% of GDP), Gross domestic product per capital, Domestic credit to the private sector (% of GDP), Broad money supply (% of GDP), Number of Branches, Age dependency ratio while the dependent variable is financial inclusion index. Deposit interest and inflation rate. The above-mentioned variables of financial inclusion serve as the basis for the entire population of this study. The data for this article was gathered from secondary sources, such as journals, World Bank statistics (2019), International Monetary Report (2019), and CBN statistical Bulletin, among others (2019). A number of diagnostic tests were performed to confirm that the regression results were relevant and scientifically credible. Econometrically, the model for the study can be expressed thus:

FINC	=]	Financial Inclusion Index					
F	= F	Function					
GDPPC	GDPPC = Gross Domestic product per capital						
PSC/GDF	P = 1	Domestic credit to the private sector (% of GDP)					
M2/GDP	= I	Broad Money Supply (% of GDP)					
NBRA	= N	lumbers of bank branches					
ADEPR	= .	Age dependency ratio					
DEIR	= I	Deposit interest ratio					
INFR	= I	nflation rate					
Econome	tricall	y, the model is re-specified as:					
FINC= β_{c} GDP C Where:	₀+β1G GDP	$DPPC+\beta_2 \underline{PSC}+\beta_3 \underline{M2}+\beta_4 NBRA+\beta_5 ADEPR+\beta_6 DEIR+\beta_7 INFR+eitegn 2$					
$\beta_{0} = Cons$	tant V	alue					
$\beta_1 - \beta_7 = P_3$	arame	ter Estimate					
eit = Sotc	hastic	Error Term					
FINC		= Financial Inclusion Index					
F		= Function					
GDPPC		= Gross Domestic product per capital					
PSC/GDF	P	= Domestic credit to the private sector (% of GDP)					
M2/GDP	:	Broad Money Supply (% of GDP)					
NBRA	=	Numbers of bank branches					
ADEPR	=	Age dependency ratio					
DEIR	=	Deposit interest ratio					
INFR	Ξ	Inflation rate					

4. Results and Discussion

This section began with the model diagnostic test and then the regression results proper.

4.1. Model Diagnostic Test

We conclude a number of diagnostic tests to guarantee that the model is not false, Homoskedastic, well-specified, normally distributed, and stable. As a result, it is presented in the preceding section:

Table 1: Heteroskedastically Test: Breusch-Pagan-Godfrey

Scaled Explained SS	3.273586	ProbChi-Square(6)	0.7739
Obs*R-squared	9.680138	ProbChi-Square(6)	0.1388
F-statistics	2.426163	Prob. F(6,8)	0.1226

Source: Econometric View Version 9.0. 9.0 (2021)

The model's Homoskedasticity was plainly displayed by the white Heteroskedasticity. This is due to the fact that the p-value is bigger than the 5% significant level. As a result, we can easily conclude that the results are reliable.

Table 2: Ramsey RESET Test Equation: UNTITLED Specification: FINDX C GDPPC PSC_GDP M2_GDP NBRA ADEPR DEIR INFR

Omitted Variables: Squares of fitted values

	Value	df	Profitability
t-statistics	1.601947	6	0.1603
F-statistics	2.566235	(1,6)	0.1603
Likelihood ratio	5.341033 -	1	0.0208
F-test Summary:	Sum of		Mean
	Sq.	df	Square
Test SSR	9.680138	1	119.3873
Restricted SSR	3.273586	7	56.93166
Unrestricted SSR	279.1343	6	46.52238

LR test summary:

	Value	df
Restricted LogL	-45.88191	7
Scaled Explained SS	-43.21140	6

Source: Econometrics View Version 9.0. (2021)

The Ramsey RESET Test clearly revealed that the model is well specified. This is because it p-value is greater than 5% significant level. Hence, we can conveniently conclude that model is fit for prediction.

4.2. Regression Result

Having satisfied the OLS assumption, the regression results is presented below:

Table 2: Summary of Ordinary Least Square Result.

Dependent Variable: FINDX							
	Meth	od: Least Squares					
	Date: 10	0/06/21 Time: 04:34	4				
	Sample (adjusted): 2005 2019						
	Includ	led observation: 15					
Variable	Coefficient	Std. Error	t-statistic	Prob.			
Constant	630.4629	326.5934	1.930422	0.1114			
GDPPC	43.73420	46.45852	0.941360	0.3897			
PSC_GDP	42.26525	73.08185	0.578328	0.5881			
M2_GDP	17.88371	6.249677	2.861541	0.0187			
NBRA	-222.6635	123.4662	-1.803437	0.1312			
ADEPR	-39.40780	987.4952	-0.039907	0.9697			
DEIR	35.16247	10.78655	3.232871	0.0103			
INFR	4.568855	12.84909	0.35578	0.7326			
R-squared	0.799369	Mean dependent van	[33.56974			
Adjusted R-squared	0.518487	S.D dependent var		8.402670			
S.E. of regression	5.830710	Akaike info criterion		6.639412			
Sum squared resid	169.9859	Schwarz criterion		6.987073			
Log likelihood	-35.15618	Hannan-Quinn criter.		6.567952			
F-statistic	3.461287	7Durbin-Watson stat2.		2.165732			
Prob. (F-statistic)	0.043605						

Source: Econometric View Version 9.0. (2021)

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The regression result in table 4.3. above revealed that the coefficient of determination (R-squared) of the model is 0.799369. this means that for the period under review and based on available data, gross domestic product per capital, domestic credit to the private sector (% of GDP), broad money supply (% of GDP), numbers of bank branches, dependency ratio deposit interest rate, and inflation rate jointly accounted for 79.94% of the total variation in financial inclusion in Nigeria. this is corroborated by the DW statistics of 2.165732 (which is approximately 2); indicating that there is no first order serial autocorrelation. Additionally, the indicator of the statistical significance of the entire model (Fisher's ratio) signaled that the model is statistically significant. Accordingly, all the explanatory variables as discussed as follows;

1. Gross Domestic Product Per Capita and Financial Inclusion

GDP per capita, which measures a country's economic well-being, showed that GDP per capita has a positive but minor impact on financial inclusion in Nigeria. This is supported by the fact that the GDP per capital coefficient is positive and the p-value is greater than the 5% level of significance. This means that if a country's production capacity is effectively spread, GDP per capita has the potential to accelerate its financial inclusion agenda. This means that as Nigerians' economic well-being increases, so does their ability to acquire and use financial products and services. Assuming, et cetera (2019) GDP per capita has a considerable impact on the measure of financial inclusion, according to Ecan&Alenoghena (2017), Assuming et al. (2019), Gebregziabher and Daniel (2019), Makina and Walle (2019). In this study, however, it was determined to be inconsequential.

2. Domestic Credit to Private Sector (% of GDP) and Financial Inclusion

Domestic credit to the private sector (percent of GDP), which reflects the proportion of credit supplied to real-world activities, has a positive and significant impact on Nigeria's financial inclusion indicators. The coefficient of domestic credit to the private sector (percent of GDP) is positive, and the p-value is below the acceptable level of significance of 5%. This means that financing to the private sector in Nigeria boosts output and financial inclusion. This adds weight to the theory that firms and the real private sector are cash-strapped, and that accumulating idle funds from the unbanked population (which accounts for a sizable portion of Nigeria's population) will enable banks to provide loanable funds and credit to private sector activity, thereby stimulating and expanding a nation's production capability frontiers.

This is in line with Gebregziabher and Daniel (2019), Ansaful (2019), and David et alsignificance .'s findings (2018). The variable, however, was found to be an insignificant factor of financial inclusion in Evans and Adeoye's (2016) study.

3. Broad Money Supply (of GDP) and Financial Inclusion

Financial inclusion is positively influenced by the wide money supply to GDP (M2/GDP) ratio, which is a measure of financial development. The positive coefficient of the variable and a p-value of less than 5% significance suggested this. This indicates that the greater the proportion of broad money supply to GDP, the greater the country's intrinsic financial inclusion level. Simply put, there is currently too much money in circulation. Moreover, despite the expansion of bank financial services, deposit liability mobilization and allocation through loans and advances supports financial inclusion of Nigeria's unbanked. This backs with the findings of David, et al. (2018), who found that broad money is a crucial factor of financial inclusion in Sub-Saharan Africa.

4. Numbers of Bank Branches and Financial Inclusion

The number of bank branches (NBR), which measures the distribution of bank branches, showed that the spread had a negative effect on financial inclusion. However, this was discovered to be statistically insignificant. This indicates that the coefficient of commercial bank branches is negative, and the p-value is more than the acceptable level of significance of 5%. This means that the proliferation of bank branches and the financial services they provide only has a minor impact on financial access. It is important to note that rural areas, which account for a major portion of Nigeria's population and a large portion of the unbanked people, have limited bank branch networks. This could be one of the reasons why this variable has such a small statistical impact on financial inclusion. This conclusion supports Gbalam and Dumani's (2020) findings, but contradicts Makina and Walle's (2019) and Ong' eta's (2019) findings, which revealed that this variable had a substantial impact on financial inclusion.

5. Age Dependency Ratio and Financial Inclusion

Inflation has a negative but minor influence on financial inclusion in Nigeria, according to this study. This indicates that the dependent rate's coefficient is negative and the p-value is more than the acceptable p-value of 5%. This means that, while the current dependency rate is high, it has little bearing on financial inclusion. This could explain why the influence on financial inclusion is statistically insignificant. According to Asif (2018), larger age dependency ratios appear to be less financially inclusive.

The deposit interest rate (DEIR), which measures the cost of attracting deposits in savings accounts, certificates of deposit, and other deposit accounts other than current account deposits, shows that the rate has a beneficial impact on financial inclusion in Nigeria.

Although the rate is positive and the p-value is more than the permissible level of significance, the rate is significant. This discovery is in line with Evans and Alenoghena's research (2017). Deposit interest has no significant impact on financial inclusion in Africa, according to the study. The study found that deposit interest rates are insufficient to attract new accounts and recurring deposits, but that this variable is a minor barrier to financial inclusion. As a result, it's critical to offer rates and offerings that entice customers to keep their money and open new accounts.

Finally, the rate of inflation has a statistically small beneficial impact on financial inclusion. This suggests that financial inclusion is only a minor issue in Nigeria. The deposit interest rate, on the other hand, has a statistically significant beneficial impact on financial inclusion.

5.1 Conclusion and Recommendation

The drivers of financial inclusion in Nigeria were studied empirically in this study. GDP per capita income, deposit credit to the private sector (percent of GDP), broad money supply (percent of GDP), number of commercial banks network, and age dependency ratio were all suggested as determinants of financial inclusion after controlling for deposit interest rate and inflation rate, as stated in the model. For the estimation, data was gathered from 2005 to 2019. Through the use of Econometric Views version 9.0, the time series data were estimated using the ordinary least square approach. The analysis suggests that the only remaining determinants of financial inclusion in Nigeria are broad money supply (percentage of GDP) and deposit interest rate. The following policy recommendations were made based on the major results of this study and the study's conclusion:

- 1. According to the report, Nigeria's present GDP per capita income could be enhanced because it is a potential factor of financial inclusion.
- 2. The existing GDP per capita income should be enhanced, according to the report, as it is a possible influencer of financial inclusion in Nigeria.
- 3. A concerted effort should be made to educate today's youth on how to open a bank account at any time of day, regardless of the amount involved. This will assist to lower the amount of money held outside of the banking system.
- 4. The spirit of entrepreneurship should be inculcated in the minds of today's youth. This will contribute significantly to lowering the country's current age dependence ratio.
- 5. According to the report, banks should expand their operations into rural areas in order to disseminate banking habits and therefore incorporate the rural population into the official financial sector.

REFERENCES

- Allen. F. Demirguc-Kunt, A. Klapper, L. & Peria, M.S. (2016). The foundations of financial inclusion: Understanding ownership and use of formal accounts. Journal of Financial Intermediation (27), 1-30.
- Ansaful. I. (2019) Determinants of financial inclusion in Ghana. Unpublished Master's Thesis Submitted to the Department of Business Administration, University of Ghana.
- Asif. R. (2018). Determinants of financial inclusion in high income and low income countries. Unpublished Master's Thesis Submitted to the Department of Management Science, Capital University of Science and Technology, Islamabad
- Asuming, P.O, Osei-Agyei, L.G, & Mohammed J.I. (2019). Financial inclusion in Sub-Saharan Africa: Recent trends and determinants. Journal of African Business, 20(1), 112-134.
- Cnaan. R. A, Venkataramani. B. & Moodithaya. M.S (2012). Financial inclusion: Lessons from rural South India. *Journal of Social Policy*, 41(1): 183-205.
- David, O.O, Oluseyi A.S. & Emmanuel A. (2018). Empirical analysis of the determinants of financial inclusion in Nigeria: 1990-2016. Journal of Finance and Economics, 6(1), 19-25.
- Gbalam, P.E. & Dunamis, M. (2020). Determinants of financial inclusion in Nigeria. *IOSR Journal of Economics and Finance*, 11(1), 14-22.
- Gupte R.A, Venkataramani. B, &Gupte D. (2012). Computation of financial inclusion index for India. Procedia Social and Behavioral Science, 37,133-149.
- Katoroogo. R.M. (2016). Behavioural determinants of financial inclusion in Uganda. Unpublished PhD Thesis Submitted to the Department of Business Management, Wits Business School, University of the Witwatersrand, Johannesburg, South Africa.
- Lotto J. (2018). Examination of the status of financial inclusion and its determinants in Tanzania. Sustainability, 10(2873), 1-15.
- Lotto J. (2018). Examination of the status of financial inclusion and its determinants in Tanzania. Sustainability, 10(1), 1-15.

- Okoroafor O.K, Adeniji S.A, & Awe E. (2018). Empirical analysis of the determinants of financial inclusion in Nigeria: *Journal of Finance and Economic*, 16(1), 19-25.
- Ong'eta, J.O. (2019). Determinants of financial inclusion: A literature review. *International Journal Social Science and Information Technology*, 5(6), 14-18.
- Otiwu K, Okere P.A, Uzowuru L.N. &Ozuzu P.N. (2018). Financial inclusion and economic growth of Nigeria (the microfinance option). *International Journal for Innovation Education and Research*, 61-78.
- Porteous D. &Zollman J. (2016). Making financial markets work healthy for the poor. Enterprise Development and Microfinance, 27(1), 1-16.
- Sarma M. (2008). Index of financial inclusion. Working paper. Indian Council for Research on International Economic Relations. No. 215.
- Sarma M. (2010). Index of financial inclusion. Discussion papers in Economics, Centre for International Trade and Development, 10-5.
- Uma H.R, K.N Rupa& G.R. Madhu (2013). Impact of bank-led financial inclusion model on the socio-economic status of Savings Account holders. *Indian Journal of Research*, 1(1), 20-31.
- Wokabi, V.A, &Fatoki, I.O. (2009). Determinants of financial inclusion in east Africa. International Journal of Business and Management, 7(1), 128-133.
- Zin A., & Weill L. (2016). The determinants of financial inclusion in Africa. Review of Development Finance, 6(1), 46-57.