



## **Service Quality Dimensions in Secondary Healthcare Facilities: A Case Study of Covid-19 Pandemic and Financial Inclusion in Nigeria**

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### **Abstract**

*COVID-19 pandemic which started in China in 2019 and quickly spread to almost all countries wreaking havoc on their economies, no doubt, would have affected financial inclusion in Nigeria. The study employed Event Study methodology developed by Dolly (1933) by applying t-test of paired significant mean differences on monthly total, and active banks' accounts five months before and five months into the emergence of the pandemic in Nigeria extracted from Central Bank of Nigeria (CBN) to assess the impact. Findings revealed that the pandemic exerted a positive impact on financial inclusion in Nigeria. Based on the finding, it was recommended that the financial inclusion experience garnered during the lockdown and social distancing under the pandemic and sequent COVID-19 Relief Loans payment by the government to the vulnerable poor people be empirically studied and the outcomes be incorporated into policies by the Nigeria financial Inclusion Strategies Committee and CBN so as to stimulate rapidly financial inclusion in Nigeria.*

**Keywords:** Financial, Healthcare, Inclusion, Service, Quality

### **1. Introduction**

COVID-19 pandemic outbreak which started from China in 2019 and quickly spread to all parts of the world affected health and socio-economic activities. On entering Nigeria 27th February 2020 it was responded to with preventive measures such as social distancing, restrictions on commercial activities, lockdown of states and subsequent implementation of several monetary and fiscal policies by the government to mitigate the effects of the pandemic. COVID-19 pandemic thus became an unexpected shock to the economies including the banking sectors of nations. In the banking sector, loan repayment by customers was impaired, non-interest revenue diminished, bonds and other traded financial instrument lost value, there was increased demand for credit (Economics Observatory, 2020). On the other hand, it was observed that it led to rapid increase in digital financial inclusion (Karadima, 2020).

Before the outbreak of COVID-19, there have been efforts to speed up financial inclusion. The efforts to reduce the number of unbanked adult people started in 2011 when a group of financial system supervisors and regulators across the world met in Riviera Maya, Mexico, and agreed to increase access to formal financial services for the world's 2.5 billion unbanked people of which More than 85% live in the developing economies. With Nigeria



having 46.3 % of its adult population financially excluded. Financial inclusion contributes to more resilient and stable financial systems which in turn stimulate economic growth. Financial inclusion increases revenue for financial institutions as more customers a bank have the more revenue it earns; it provides opportunity for an emergency and development of middle class. At the household level, financial inclusion not only makes families to earn more income and create employment for them; it helps them to build assets, and provides them security against shocks.

Consequent upon the Maya declaration and considering the numerous benefits derivable from having substantial percentage of the population that have access to formal financial services, Nigerian governments through its agencies have introduced several policies aimed at decreasing the level of financial exclusion which stood at 39.7 % of adult population in the country in 2012 to 20% by year 2020. These policies include the introduction of National Financial Inclusion (NFIS) in 2012 with a mission to decrease the number of Nigerians without access to financial services, the launch of Shared Agent Network Expansion Facilities project by the Central Bank of Nigeria (CBN) in conjunction with other stakeholders in the Nigeria financial system in 2018; a project which deployed 500,000 agent networks in under-served urban and rural areas. In addition, CBN still in 2018 set new guidelines that allowed companies other than banks to offer banking services to their customers all with the view of expanding access to financial services. Another opportunity that has been utilized in the promotion of financial inclusion is the utilization of financial technology (fintech); with the application of new or existing technology or innovation in conducting financial transactions using smart phones and computers with little or no human interaction. Its usage in Nigeria increased substantially with the boom in information technology in 2015.

With the concerted efforts of the government and the private sector, financial exclusion was reduced to 39.7% from 46.3% of adult population in 2010. However, as at the end of 2020, 36.8% of Nigeria adult population (38 million adult Nigerians) still did not have access to formal financial services (EFInA, 2021). Substantial percent of this huge number of people excluded certainly patronized Alternative financial services (AFS) providers who render such similar services at a higher price. While, others financially excluded people that do not have a secure place to save money, making saving difficult for them, and thus retarding national savings that would have been available for investment; those financially excluded people do not have access to small loans or credit lines to start or expand their businesses, in addition to facing difficulties in receiving payments from customers or remittances from relatives.

The entrance of the dreaded virus into Nigeria on 27th February 2020 and its rapid spread across the country was responded to with preventive measures which included social distancing, restrictions on commercial activities, and lockdown of states. Although, the banks were exempted from the lockdown as they were expected to provide essential services during the period of the lock-down, the banks refused to open their doors to



customers as they too took their own survival more seriously thus intensifying the use of digital channels for transactions, together with the relaxation of several regulatory and supervisory provisions, coupled with retardation of operational resilience and increase of non-performing loans. After the lock down, several monetary and fiscal policies were put in place by the government to mitigate the effects of the pandemic. The health crises, the restrictions imposed, and the economic stimulus policies that followed would have no doubt affected financial inclusion efforts in Nigeria. There are contending views on the nature of the effect and to what extent it has affected financial inclusion. One of the views is that COVID-19 stimulated financial inclusion by opening opportunity for the development of other aspects of the ecosystem including the reduction in the number of financially excluded of the country as well as stimulating robust digital financial tools. However, there is a contending view that COVID-19 has rather retarded financial inclusion. Furthermore, there is another observation that traditional banking declined during the COVID-19, and consequentially there was increase in e-banking. Hence, the pertinent question is how and to what extent did COVID-19 affected financial inclusion in Nigeria? Existing studies relating to financial inclusion and COVID-19 have been on the effects of COVID-19 on banking performance (see Demirgue-Kunt, Pedraza and Ruiz-Ortega, 2021; Barua and Barua, 2020), and on the determinants of financial inclusion (see Eze and Markjackson, 2020; Okoroafor, Adeniji and Awe, 2018; and Ajide, 2017). The only study seen on the impact of COVID-19 on financial inclusion is Kasradze (2020)'s study for Georgia which should not be applied to Nigeria as the two countries differ structurally. Against this backdrop, this study critically investigate the impact of COVID-19 on financial inclusion in Nigeria with the objectives of not only understanding the impact of COVID-19 on the banking services providers but also on how it has affected promotion of financial inclusion. Finding of the study will assist in reshaping policies targeting financial inclusion. To achieve these objectives the paper is structure into five sections. Following this introduction is a literature review, which is preceded by research methodology, result analysis and discussion of findings, then conclusions and recommendations.

## **2. Literature Review**

### *Theoretical Foundations*

*Says Law of Market:* The idea of financial inclusion is rooted on Says Law of Market. In this study it is supported with Public good theory of financial inclusion, Collaborative intervention theory of financial inclusion and Systems theory of financial inclusion. On the impact studies of an unanticipated shock such as a pandemic on a market/system the Black Swan theory is used as the foundation. This study used Says Law of Market supported by Public good theory of financial inclusion leaning on the Black Swan theory. Financial inclusion which is about banks and other financial agencies providing access to financial services to the under banked populace at affordable cost is premised on Says law of market enunciated by an early 19<sup>th</sup> century economist J.B Say's. It states that supply creates its



own demand. According to Say, it is production that creates market for products. According to him, a product is no sooner created that, it from that instant, afford a market for other products to the full extent of its own value. Nothing is more favourable to the demand of one product, than the supply of another. Although the theory was originally developed as a theory of employment, it has been variously applied in explanation of market phenomena. The import of Says law of market on financial inclusion states that, the banking sector should provide banking services through expansion of branch network mostly to the rural areas. This will bring many unbanked people into the formal financial coverage that will in turn stimulate economic activities which will sustain the business operation of the bank or the financial agency in that business area.

*Public Good Theory of Financial Inclusion:* The public good theory of financial inclusion states that, formal financial services should be treated as a public good for the benefit of all and the economy. People should not be excluded from having access to financial services as access to financial services by an individual does not reduce its availability to others. Based on that, all adult population can be brought into the formal financial sector at no cost to the people. Under this theory, any individual or small business that open a bank account should be issued with debit cards, and should be allowed to use the Automated Teller Machine (ATM) free of charge from the banks and the allied financial service providers bearing the cost as a sunk-cost of doing banking business or the government subsidizing the services. According to the theory, the government by a way of encouraging the poor mass to own bank account by providing a lump-sum cash deposit and make opening of account a condition of accessing that fund.

*Collaborative Intervention Theory of Financial Inclusion:* Collaborative intervention theory postulates that, financial inclusion should be achieved through collaborative intervention from multiple stakeholders. The theory encourages a multi-stakeholder approach to achieving financial inclusion. The achievement of financial inclusion is said to give the stakeholders satisfaction of contributing to a public project.

*Systems Theory of Financial Inclusion:* The system theory of financial inclusion states that financial inclusion is achieved through the existing sub-systems (economic, financial or social) that the financial inclusion depend on, and, greater financial inclusion will in turn positively affect the systems it depends on. The theory is of the view that a significant change in the sub-system that the inclusion depends on will cause significant changes in the financial inclusion to the ultimate benefits of the sub-system. The systems theory put the promotion and success of financial inclusion on the efficiency and effectiveness of existing economic, financial and social systems or structures in a country.

*The Black Swan Theory:* The Black Swan theory is about an impact of a highly improbable, rare and unpredictable event on a society that after it has taken place, the society will retrospectively provide a simplistic explanation to the event. It was developed by that which was developed by Talib in 2001. The theory was developed based on a story in an



olden day Australia where it was unknown that there was a black swan except the known white swans such that when a scientist discovered a black swan that looks exactly like the known white swan it was a great shock which seriously changed their thought. Talib (2001) applied the theory on the impact of unexpected event on stock market and other commercial activities.

The Black Swan theory postulates that in planning, one should understand that the factors he does not envisage can be far more influential than what he has envisaged, thus, limiting one's reliance on knowledge in predicting future happenings and outcomes. The black swan event can be in form of an outbreak of a pandemic, natural disaster, war, financial crash among other eventualities. However, it should be noted that the theory is not on how to predict eventualities, but on how to put strong measures in place that can reduce their likelihood impacts, benefit from negative ones and an ability to exploit the ones that are positive.

#### *Conceptualization*

*Financial Inclusion:* Financial inclusion started gaining prominence of financial policy makers and researchers after the outbreak of the financial crisis. The concept is all about providing financial services to the poor classes permanently and at affordable costs with the aim of bringing that segment of society into the formal economy (United Nations, 2016). Financial inclusion, according to the World Bank (2018) is delivering useful and affordable financial services (transactions, payments, savings, credit and insurance) in a responsible and sustainable way that individuals and businesses can have access to. It is the provision of access, and the use of formal financial services to improve the welfare of individuals in a country (Demirgüç-Kunt, Klapper, Singer, Van Oudheusden, 2015; Ozili, 2020). It has also been defined as the provision of access to financial services to all members of the population particularly the poor and the other excluded members of the population (Ozili, 2018). Financial inclusion is mostly about provision of access and usage that should be highlighted because some people may have the financial services available to them but they may refuse to patronize them due to one reason or the other. This is different from those who are in need of financial services and products but could not be integrated into the financial system because the providers are not within their reach.

The provision of access to financial services that are well suited for low-income earners and other people who were excluded from formal financial sector enhance aggregate savings, credit creation and investment. Furthermore, it encourages the poor to save money, and helps in mitigating the risks that the poor faces as a result of economic shocks (Mehrotra, Puhazhendhi, Nair and Sahoo, 2009). It stimulates high levels of bank deposits there by stabilizing the banks and the banking sector in general (Ahamed and Mallick, 2019; Han and Melecky, 2013). With all these benefits together with acting as a means of integrating the informal economy of individuals and institutions into formal economic structure, financial inclusion has become one of the pillars of economic growth in developing economies.



Having a bank account is an important first step towards financial inclusion. Furthermore, better inclusion involves the ability to use the accounts securely and conveniently including digital payments, payments via a mobile phone or the internet (Dorofeiev, 2019). Achieving financial inclusion depends on factors such as location of banks, operating charges paid on a bank account, documentation requirements to open an account, credit provided by the financial sector, level of trust people have on the banking system, corruption, and the use of bank accounts for government payments (Zurnadze, 2019; Allen, Demirguc-Kunt, Klapper, and Peria, 2016; Evans, 2016; Serrao, Sequeira, and Varambally, 2013). Fundamentally, it depends on level of income, regulations, literacy, and financial technology (Inoue, 2019). Against these backgrounds, Some policies and practices that stimulate rapid financial inclusion includes; opening of bank accounts with minimal documentation requirements, compelling people to obtain Bank Verification Number (BVN), granting free debit cards, granting free insurance policies, using mobile technology to access finance, large-scale use of bank correspondents, offering of basic or low- fee accounts, exempting small or rural depositors from onerous documentation requirements, and the use of bank accounts for government payment among others.

*Digital Financial Inclusion:* Digital financial inclusion involves the deployment of cost-saving digital means to reach currently financially excluded and underserved populations with a range of formal financial services suited to their needs that are responsibly delivered at a cost affordable to customers and sustainable for providers (World Bank, 2018). Digital financial inclusion is driven by financial technology (Fintech) which is a technology that disrupts traditional ways of conducting financial transactions. It brings about a new means for performing financial transactions with little or no human interaction.

Financial technology-driven financial services are filling the gaps left by traditional banks and their agents which typically provide services through brick-and-mortar establishments at high costs. Financial technology-driven financial firms perform several services including facilitating access to accounts, transactions, credit provision, and acting as intermediaries between SMEs together with investors that are willing to invest in the SMEs. The emergence of fintech makes financial services accessible from mobile phones or computers thus reducing the need for face-to-face interactions.

#### *Empirical Literature Review*

Kasradze (2020) examined the impact of Covid-19 pandemic on financial inclusion in Georgia and the responses of the governments and the financial sectors to the challenge of ensuring financial inclusion of the poor population, and small and medium enterprises. The study found that the financial system was under stress, and financial institutions are unable to receive disbursements from their clients whose livelihoods have been destroyed by the pandemic. The study concluded that since the COVID-19 pandemic has had a negative impact on the financial sector, naturally the same can be said about financial inclusion as the pandemic affected all stakeholders in financial inclusion - the poor, microfinance organizations', banks and other financial institutions.



Shahabi, Azar, Razi and Shams (2021) studied the impact of COVID-19 outbreak on the acceptance of branchless banking in Iran. The study identified the factors affecting the acceptance and development of branchless banking in Iran at the time of COVID-19 outbreak by systematically studying the theoretical framework, conducting research and interviewing the experts; then, a causal loop diagram of the problem in the proposed case study and the flow rate model were presented. Findings show that banking transactions and a bank's financial resources would increase, thus reducing the number of branches, promoting incentive policies and increasing the budget rate of the bank in Information Technology (IT). The spread of COVID-19 was a positive factor, or even a catalyst, in the acceptance and development of branchless banking in Iran. Demircuc-Kunt, Pedraza and Ruiz-Ortega (2021) assessed the impact of the COVID-19 on the banking sector performance. Using a global database of policy responses during the crisis found that the crisis and the countercyclical lending role that banks are expected to play have put banking systems under significant stress. Barua and Barua (2020) examined the possible impacts of the COVID-19 pandemic on Bangladesh banking sector using a state-designed stress testing model. The study estimated the impacts of the COVID-19 pandemic on three particular dimensions which include firm value, capital adequacy, and interest income—under different NPL shock scenarios. The study found that all banks are likely to see a fall in risk-weighted asset values, capital adequacy ratios, and interest income.

Ajide (2017) examined the determinants of financial inclusion by specially accounting for the role of institutions in a panel of eighteen (18) sub-Saharan African (SSA) countries using a dynamic system of Generalized Method of Moments (SYS-GMM). The study revealed the importance of institutions together with other control variables like GDP per capita, inflation, bank concentration and z-score as the key determinants. Abel, Mutandwa and Le Roux (2018) evaluated the determinants of financial inclusion in Zimbabwe. The study established that age, education, financial literacy, income, and internet connectivity are positively related to financial inclusion. On the other hand the documentation required in opening a bank account and the distance to the nearest access point are negatively related to financial inclusion. The study recommends that the government should put in place policies that encourage financial service providers to set up their operations closer to the people or ensure they adopt technologies that ensure financial services are more accessible such as agency and mobile banking. Eze and Markjackson (2020) examined the determinants of financial inclusion in Nigeria using data spanning from 2000 to 2018 which were collated for estimation. The data were estimated using the error correction technique. The study found out that, domestic credit to private sector, ratio of rural deposits to loans and lending interest rate are the determinants of financial inclusion in Nigeria. The study suggests for lending interest rate to be made attractive to encourage continuous access to loanable funds in the market. The target therefore should be aimed at creating a conducive financial system that upholds financial access driven rates. That is, rates (that are not too low or excessive) that would encourage economic agents to save and borrow to spur economic activity.



Okoroafor, Adeniji and Awe (2018) examined the determinants of financial inclusion in Nigeria using a time series data for the period of 1990 to 2016 and employed Error Correction Model (ECM). It was discovered that the country's GDP per capital, broad money supply, credit and internet users per 100 people have positive impact on financial inclusion. Ayopo, Isola, Okafor, Akhanolu, Achugamonu, and Osuma (2020) examined the factors that led to the early achievement by South-West Nigeria of 80% financial inclusion in 2016, ahead of the 2020 target set by the National Financial Inclusion Strategy Group (NFISG) and also ascertains the sustainability of the success achieved. In a survey of 475 low-income earners randomly selected across the six states in the zone, 348 have a bank account with a formal institution, while 127 have no formal bank account. Descriptive statistics, sample t-tests and probit regression analysis were used for the analysis. It was found that, male adults, aged 20–40 years, urban dwellers with high Internet penetration in the zone, in environments with active state government policy concerning financial inclusion, being salary earner or self-employed are likely to own and use bank accounts more frequently than others. Furthermore, irregular income/job loss, hidden/unknown charges, high maintenance fees, lack of trust and long queues in the bank are high threat factors for financial inclusion, while new employment, performing banking transactions via mobile phone, target product, financial literacy education and access to loans are most likely to promote financial inclusion

*An Overview of Financial Inclusion in Nigeria*

Nigeria is a middle income economy, largely involved in subsistence agriculture with an estimated total population of 206.14 million people in 2020 (World Bank, 2021). More than half of the populations were adults. Her Gross Domestic Product (GDP) growth rate was 2.2% in 2019 but fell to -3.0 in 2020. Nigeria is the largest economy in Africa. The financial sector contributed 3.6% in real term to the GDP in 2020. The Nigeria financial system include banks, capital markets, insurance, Pension asset managers and other financial institutions with the central bank as the apex banking institution. Banking institutions are the main providers of formal financial services in Nigeria. The banking subsector includes deposit money (commercial) banks, microfinance banks, primary mortgage, Development and merchant banks. In 2020, there were a total of 22 commercial, 940 microfinance, 35 Mortgage, 6 Development, and 5 merchant banks in Nigeria (CBN, 2021).

Financial inclusion strategy was launched in 2012 by the Central Bank of Nigeria (CBN) with the objective of promoting expansion of financial accessibility. However, before then how to expand and make banking services accessible to the people have been part of banking sector reforms in Nigeria. In 1977, a rural banking programme was introduced mandating the commercial banks in Nigeria to establish rural branches. In 1989, the People's Bank was introduced to bring banking closer to the people; in 1990, the community banking system was established, to enable members of the community to have





access to financial services. Furthermore, the National Microfinance Policy to cater for the financial needs of the poor and low income earners was introduced in 2005.

Consequent upon the Maya Declaration in which a group of financial system supervisors and regulators across the world met in Riviera Maya, Mexico in 2011, and agreed to increase access to formal financial services for the world's 2.5 billion unbanked people, a survey conducted in Nigeria in 2008 by a development finance organization, titled Enhancing Financial Innovation and Access revealed that about 53.0% of adults were excluded from financial services, CBN launched In 2012, the National Financial Inclusion Strategic Plan. The National Financial Inclusion Strategic plan was aimed at reducing the exclusion rate to 20% by 2020. Specifically, adult Nigerians with access to payment services is to increase from 70%, while those with access to savings should increase from 24.0% to 60%; and Credit from 2% to 40%, Insurance from 1% to 40% and Pensions from 5% to 40%, within the same period.

Subsequently, CBN promoted electronic banking and mobile money transactions which kick start digitalization of banking transactions in the country and with the emergence of such features as the use of Point of Sale (POS), e-banking and payment service agents. Agency banking broadens the digital frontier; it facilitates financial transactions like account opening; balance enquiry, deposit and withdrawals as well as transfers, without the need to physically travel to a branch location. In addition, CBN, in 2018 came out with a policy that allows companies other than banks to offer banking services to their customers. Telecommunication firms like MTN Nigeria and Airtel Nigeria have started.

Financial inclusion grew from 30% in 2010 to 60.5% in 2014, then to 58.4 percent in 2016, to 63.2% in 2018; and projected to be 80% (CBN 2021; EFINA 2021). In absolute terms, the number of adult Nigerians who were financially excluded actually raised from 34.9 million in 2012 to 40.1 million in 2016 (CBN 2018). Total number of bank branches stood at 4.3 per 100,000 people with 155.08 million bank accounts

The problem is most acute in the northern parts of the country, where rates of financial exclusion are more than double the rates of the southern parts (EFInA, 2018). Cultural/religious barriers can be said to be one of the reasons for this.

### **3. Methodology**

The study employed Interrupted Time-series Quasi-Experimental Designed ITSQED to assess the impact of the COVID-19 on financial inclusion in Nigeria. The choice of this method is due to its ability in detecting the effects of interventions when it is difficult to randomize or identify an appropriate control group (Cook and Campbell, 1979). Based on this, Event Study methodology developed by Dolly (1933) was employed for the assessment. Event study analysis is an econometric technique used to estimate and draw inferences about the impact of an event in a particular period or over several periods. It examines the extent at which an institution, a market or system react to event (intervention). It is used in financial studies to test how certain performance indicators



respond to a particular event (Brooks, Patel, Su, 2003; Binder, 1998; Fama, 1976). It was used in this study to assess the impact of COVID-19 outbreak and its mitigation responses as an event on financial inclusion performance in Nigeria. The performance assessment was done on the banks total, including active bank accounts which is the fundamental indicators of financial inclusion (Zins and Weill, 2016). February 27<sup>th</sup>, 2020 the date the index case was announced in Nigeria was used as the event day (month in this case), while, the event windows were taken as 5 months before the announcement of the COVID-19 pandemic in Nigeria to 5 months into the pandemic. The five months before and into the pandemic was taken to avoid interference of other factors. The monthly data on the indices were obtained from Nigerian Interbank settlement NIS and the CBN.

The two samples employed for the study are independent and are taken from a population with equal variances, and the data are continuous as such t-test of mean difference estimation technique was applied to determine whether there was a significant difference in the performances of the financial inclusion indices between the sampled period before the outbreak of the pandemic and the period after the outbreak of the pandemic this follows Ngwakwe, 2020; Kim and Tang, 2020; Guo, Kuai and Liu, 2020. T-test is a statistical parametric test of difference use in comparing the means of two groups to determine whether an event or treatment has a significant impact that makes one of the groups significantly different from another. It was developed by William Sealy Gosset in 1908 who published under the pseudonym for testing of small sample size (sample size less than 30) as against using the normal standard distribution. The test has a null hypothesis ( $H_0$ ) that the true difference between these group mean is zero against an alternate hypothesis ( $H_a$ ) which states that the true difference is different from zero. The  $t$ -distribution is a curve having a number of degrees of freedom (the number of independent observations in the sample minus one). As the sample size increases, the  $t$ -distribution approaches the bell shape of the standard normal distribution

The test was conducted on a two-tailed bases with a null hypothesis that there was no significant difference between the two groups' mean which is either rejected or not rejected after the computed t-value is compared with the standard t-values at an  $\alpha$  level. If t-computed is more than t-observed, the null hypothesis is rejected in favour of the alternative. The probability level, ( $p$ -value) which is the probability that the test statistic takes a value at least as extreme as the observed value assuming the null hypothesis is true was equally applied in the decision rule. If the  $p$ -value is less than the selected  $\alpha$  level, the null hypothesis is rejected in favour of the alternative hypothesis. The t-test is:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s/\sqrt{n}} \dots\dots\dots 1$$

Where:  $\bar{x}_1$  = mean of first sample (before the announcement of the event);  $\bar{x}_2$  = mean of the second sample (after the announcement of the event);  $s$  = standard error and  $\sqrt{n}$  = square root of the sample size.



**4. Results**

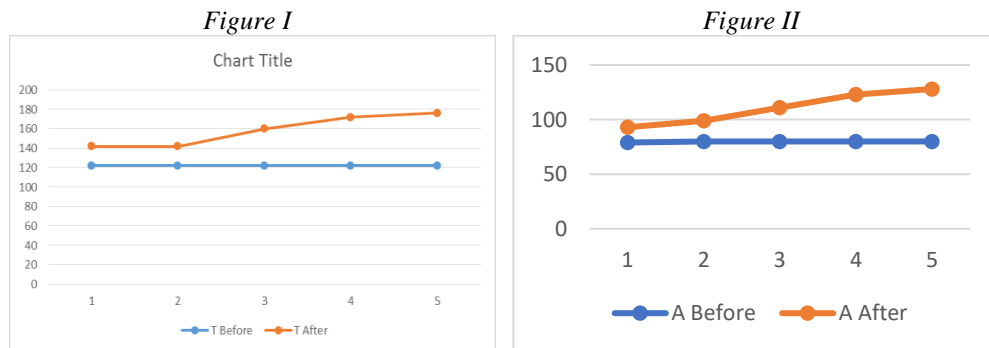
The t-test results showing the extent of significant mean difference between the period before the emergence of the COVID-19 pandemic in Nigeria and the period into it on financial inclusion in Nigeria are presented in Table 1.

Table1: Results of t-test of Mean Difference between the level of Financial Inclusion before and after the emergence of COVID-19 in Nigeria.

No.	I	II
Index	Total Accounts	Active Accounts
Mean 2 (i.e. After the coming of Covid)	158	110.8
Mean 1(i.e. Before Covid)	122	79.8
Hypothesised Mean	0	0
Diff. Mean	36.0	31.0
Diff. Std. Dev	16.5	15.0
Pr (T<= t)	0.00718325	0.009232505
t-cal.	5.0594609	4.711050348
Observation	5	5
D.F	4	4
t- $\alpha$ 0.05%	2.776445105	2.776445105
Decision	H0 Rejected in favour of a positive impact.	H0 Rejected in favour of a positive impact.

Source: Authors' Computation

A line graph showing the trends in Total Accounts index of the financial inclusion is presented in Figure 1. A line graph showing the trends in Active Accounts index of the financial inclusion is presented in Figure II.



Based on the result presented in Table 1, COVID-19 exerted a significant increase in financial inclusion. Using the Total Account, as can be seen in column I of the Table, the difference in the mean values is 36; The t-stat value is 5.0595, while the t- observed value is 2.7764 with a P-value; Pr (T< t) of 0.0072. Since the t-stat value of 5.0595 is more than the t- table observed value of 2.7764, the decision fell into the critical region. Therefore,



the null hypothesis is rejected in favour of an alternative positive effect. This was supported with the P-value of 0.0072 which is less than  $\alpha_{0.05}$  level. In the same vain, the Active Account, as can be seen in column II of the Table, has a difference in mean value of 31; the t-stat value of 4.110, with a P-value of  $Pr(T < t)$  is 0.0092, and the t-observed value of 2.7764. Since the t-stat value of 4.110 is more than the t-observed value of 2.7764, it fell into the critical region. Thus, the null hypothesis is rejected in favour of an alternative hypothesis of a significant positive effect. This decision is equally supported with a very low P-value of 0.0092 which is less than  $\alpha_{0.05}$  level. These results indicate that Covid-19 pandemic significantly improve financial inclusion in Nigeria.

The finding is consistent with the finding of a similar study by Shahabi, Azar, Razi and Shams (2021) which found that the spread of COVID-19 was a positive factor, or even a catalyst, in the acceptance and development of branchless banking in Iran from their study of the impact of COVID-19 outbreak on the acceptance of branchless banking in Iran. It is however, not in consonant with Kasradze (2020)'s study which concluded that since the COVID-19 pandemic had a negative impact on the financial sector, naturally the same could be said about financial inclusion as the pandemic affected all stakeholders in financial inclusion - the poor, microfinance organizations', banks and other financial institutions.

The increase in financial inclusion can be attributed to the social distance measure put in place as one of the non-pharmaceutical measures in fighting against COVID-19. Due to this, E-banking and e-payment became necessary platforms and tools in minimizing physical contacts, and for it to be effective, a bank account is required thus creating an upsurge in opening bank accounts. Other factors that could be said to have contributed to the surge were the COVID relief loans that were given to vulnerable poor people and small and medium scale enterprise which encouraged some of them to open bank account to enable them access the loans.

##### **5. Recommendations and Conclusion**

Consequent upon the finding, the study recommend that the deposit money banks, CBN, and the Nigeria Financial Inclusion Strategies Committee should learn from all the factors that led to this height as a result of the pandemic and thereby include them in their financial inclusion fast tracking designing policies. One of these factors as highlighted before is the heighten interest of the people in E-banking. In this regards, the money deposit banks should improve on their e-banking infrastructure.

Conclusively, the COVID-19 pandemics started in China spread and wreak havoc on the economies of most countries of the world, no doubt, have affected financial inclusion in Nigeria. This study applied Event Study methodology developed by Dolly (1933) to assess the impact; it was revealed that the pandemic exerted a positive impact on financial inclusion in Nigeria. It is therefore, recommended that the experience gathered under the



pandemic be incorporated into policies by the Nigeria financial Inclusion Strategies Committee and CBN so as to stimulate rapidly financial inclusion in Nigeria.

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