Toward the Attainment of Sustainable Development Goals: The Impact of Transformative Service Research on Financial Inclusion

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Abstract

Adopting approaches of Transformative Service Research (TSR), the study explored rural and urban perspectives of Financial Inclusion, an enabler of the attainment of the 2030 Sustainable Development Goals, in an emerging economy. A cross-sectional survey was conducted in one of the largest cities in Africa with specific emphasis on an urban and a rural population. The urban sample was obtained from a major urban setting in the city while the rural sample was obtained from the outskirts of the city. Non-probability sampling methods were used to derive the study sample, which included a combination of purposive and convenient sampling. The study sample was made up of 453 participants with 46.8% of them being rural residents and 53.2% being urban residents. A structured questionnaire was utilized in eliciting relevant information from the study participants. Outcomes as depicted by an empirical framework showed that residential status had a significant main effect on access to financial inclusion services, such that rural residents had limited access to financial inclusion services; while perceived cost of financial inclusion had a significant main effect on usage of financial inclusion services, such that perceptions of high cost of perceived inclusion resulted in less usage of financial inclusion services. Based on the study outcomes, financial institutions may consider rural-urban differentials in ascribing service charges for financial inclusion services to encourage usage.

Keywords: transformative service research, financial inclusion, rural-urban differentials, emerging economy, sustainable development goals

1. Introduction

Financial inclusion plays an important role as an enabler in the attainment of the 2030 Sustainable Development Goals (SDGs) where it is featured in 8 of the 17 goals. These goals are SDG 1, poverty eradication, SDG 2, ending hunger, SDG 3, good health and wellbeing, SDG 5, achieving gender equality and economic empowerment of women, SDG 8, promoting economic growth and jobs, SDG 9, supporting industry, innovation, and infrastructure, SDG 10, reducing inequality, and SDG 17, strengthening the means of implementation based on the implicit role for greater financial inclusion through greater savings mobilization for investment and consumption to promote growth (United Nations Capital Development Fund, UNCDF, 2024). Financial inclusion is the delivery of banking services at an affordable cost to the entire population, including disadvantaged and low-income groups (Dev, 2006). The basic definition of financial inclusion is the ability to own an account and have access to credit and be able to conduct transactions in a formal financial institution (Zins and Weill 2016). Financial inclusion can also be defined as the delivery of banking services at an affordable cost to the vast sections of disadvantaged and low-income groups (Dev 2006). Ozili (2018) also described financial inclusion as the provision of, and access to, financial services to all members of population; particularly the poor and the other excluded members of the population. In all these definitions, financial inclusion is identified as one of the important factors to accelerate economic development because it provides opportunities to poor and vulnerable members of the society, including women and youths, to become empowered and contribute to their country’s level of economic development.

Trends in the literature have shown that a developed financial system is not a guarantee of financial inclusion
(Beck et al. 2015). Several studies on financial inclusion have often focussed on developed economies with an outlay of how financial institutions are able to include the financial inclusion bracket in these advanced economies through their brand perception and advertising strategies (Czarnecka and Mogaji 2019; Swani and Iyer, 2017). Within the context of emerging economies, there is the argument a dearth of information exists on how financial institutions expand the financial inclusion bracket to accommodate more members of the society. Increasing the number of people in the financial inclusion bracket in emerging economies is imperative and urgent for the following reasons:

1) It allows more people to engage in economic activities (Demirguc-Kunt and Klapper 2013, Soetan, 2014) which enhance their wellbeing.

2) It helps to expand the market such that people who were hitherto excluded financially can reap the benefits inherent in financial inclusion (Asuming et al 2018, Soetan and Umukoro, 2023), and,

3) It enhances the rapid and accelerated economic development of a country (Sharma 2016) as a result of the education and empowerment of the citizens and residents (Kieu et al, 2020).

It has been observed that poor, unemployed/under-employed and low status individuals are often excluded from financial services by financial service providers (Mogaji et al. 2021, Soetan, 2014, Soetan et al. 2021). These individuals rarely own a bank account and mostly operate in the informal sector of the society. Banks often do not target these individuals due to the fear of amassing dormant accounts. Also, due to the fact that persons within this category usually have no collateral to qualify for bank loans or credit facilities, many banks are not likely to make any profits (needed to sustain their business operations) by patronizing these individuals. This lack of access or poor access to financial products and services leads to slow economic development (Sharma 2016), and the restriction of opportunities to engage in economic activities (Demirguc-Kunt and Klapper 2013) in developing economies. Even without owning a bank account, Caicedo (2019) states that financial inclusion is rapidly improving in developing economies around the world as a result of the widespread use of mobile devices. It is estimated that over 1 billion people out of about 1.7 billion unbanked adults, globally, now own a mobile device (Caicedo 2019; Demirguc-Kunt et al. 2018).

Sub-Saharan Africa (SSA), in recent years, have also experienced an increase in the population who mobile device users with about 747 million active SIM card connections (representing 75 percent of the population) accounted for in the region (Elliot 2019). The increasing number of mobile device users in developing economies of the world presents an opportunity to increase financial inclusion through the combination of the efforts from banks and non-bank financial institutions (including fintechs, and regulatory authorities such as Central Banks or Federal Reserve Banks). This study is therefore hinged on the importance of transformative service research (TSR) in expanding financial inclusion and accelerating economic growth of developing economies.

This study addresses current challenges within Nigeria owing to the status of the country as a populous and major economic hub in Africa. In terms of its market value, Nigeria also stands out as a major consumer of goods and services across the globe. The population of the country is approximated at over 200 million, accounting for about 20% of the African population in general (World Bank 2018). However, according to the Global Financial Inclusion Database provided by the World Bank, Nigeria and six other nations in Africa account for close to half of the unbanked population across the globe, with 60% of Nigerian adults being unbanked. As a measure to increase the banked population in Nigeria, its Central Bank has begun promoting and encouraging non-financial institutions to be involved in the banking system. Fintech start-ups and telecom operators are not left out in this financial inclusion strategy as various banking systems have been incorporated within the services of these agencies. Despite these measures and interventions, Nigeria still has a long way to go in expanding its financial inclusion base; this is because the availability of financial inclusion services does not necessarily translate into the consumption and usage of these services due to a myriad of factors that influence the rate of acceptability of these new technologies.

Recognizing the importance and need for financial inclusion especially in emerging economies, this study aims to make a theoretical, empirical and managerial contribution to the study of financial inclusion in Nigeria via the impact of TSR. This study aims to explore the attitudes of poor, low-status individuals toward owning, operating, or maintaining a bank account and the financial platforms made available for these categories of customers. It is expected that this study will provide an insight into the impact of TSR on financial inclusion in the most populous and largest economy in Africa and reveal the challenges that confront poor and low-status individuals from overcoming the barriers of financial exclusion. The overarching research goal is to better understand the process of financial inclusion in Nigeria from the perspective of TSR, financial institutions, and households alike.
by considering three research questions. These are:

1) Is there any significant relationship between residential status and perceived cost of financial inclusion on access to financial inclusion services?
2) Will there be a significant main and interaction effect of residential status and perceived cost of financial inclusion on quality of financial inclusion services?
3) What is the degree of interaction between residential status and perceived cost of financial inclusion on usage of financial inclusion services?

Based on these three research questions, three hypotheses developed were:

1) There will be a significant main and interaction effect of residential status and perceived cost of financial inclusion on access to financial inclusion services.
2) There will be a significant main and interaction effect of residential status and perceived cost of financial inclusion on quality of financial inclusion services.
3) There will be a significant main and interaction effect of residential status and perceived cost of financial inclusion on usage of financial inclusion services.

2. Significance of the Study

Financial inclusion has been identified as an important enabler in the attainment of the 2030 SDG goals. It is also one of the important factors to accelerate economic development because it provides opportunities to poor, low-income and unbanked people or customers including women and youth to become empowered and contribute to their immediate society’s economic development. Financial Inclusion is not only important in providing and promoting economic growth and development because it promotes broader and inclusive development but is also an important enabler of the 2030 SDG goals. Outcomes of the study would provide insight into the possibilities of keying into and increasing financial inclusiveness among banked and unbanked populations in the society. Enhancing financial inclusion would also promote access to financial tools and services that allow financially excluded people in developing economies to be able to invest in their own education (Demirguc-Kunt and Klapper 2012; Kieu et al, 2020; Soetan and Nguyen, 2018; Soetan and Nguyen, 2023)) and overcome the poverty barrier that is experienced on a daily basis (Mba 2017; Mogaji et al, 2020; Soetan, 2020, Soetan and Umukoro, 2023).

This study is intended to contribute to the academic literature TSR on financial inclusion from the perspective of financial institutions and households in emerging economies. This study offers practical suggestions to financial institutions on how to enhance financial inclusion from the angle of household and individual perspectives. It also makes a significant quantitative contribution to the academic literature of TSR on financial inclusion in emerging economies.

The remainder of this paper is organized as follows. First, a literature review of financial inclusion is provided, which includes an overview of financial inclusion in Nigeria, an emerging economy, a theory of vulnerable group of financial inclusion, conceptualization of financial vulnerability, TSR, and TSR and financial inclusion. A detailed outline of the research methods is presents and followed by the results from the analyses of data obtained from household members across rural and urban locations in Nigeria. Insights from the results obtained are then used in highlighting the theoretical, empirical and managerial contributions of the study outcomes.

3. Literature Review

In recent times, financial inclusion has been a major policy initiative and objective of governments in both developing and emerging economies due to the benefits it provides to their economic development. It provides the opportunity to bring the excluded and vulnerable population into the formal financial sector, such that they can be empowered through the provision of access to formal financial products and services (Allen et al. 2016). As a result of the tremendous efforts being paid to financial inclusion, several emerging economies are already experiencing high levels of financial inclusion which is aiding the economic acceleration of these economies. There have been success stories on financial inclusion in several developing and emerging economies such as India, (Nimbrayan 2018), Rwanda, (Lichtenstein 2018; Otioma et al, 2019), Kenya, (Ndung’u 2018; Hove and Dubus 2019), Nigeria, (David et al. 2018; Mogaji et al, 2021; Ozili 2020; Soetan et al. 2021; Soetan and Umukoro, 2023), Peru and other Latin American countries (Cámara and Tuesta 2015; Caicedo 2019).

In spite of these recorded successes, there is still a long way to go for developing and emerging economies to achieve the effective form of financial inclusion obtainable in developed economies. This disparity highlights the huge gap between those in the financial inclusion bracket and the excluded groups in developing and emerging
economies. Literature reveals that a low level of financial inclusion does not augur well for the economic emancipation in emerging markets. Dawar and Chattopadhyay (2002) suggest that most consumers in emerging and developing economies are daily wage earners who do not have the capacity to engage in significant savings but rather depend on a limited cash flow of income for daily survival. Consequently, such consumers are focused on survival (food, clothing, and shelter) and are not invested in owning or using financial services. In addition, there are fewer financial service operators across the vast rural areas in these emerging and developing economies. As a result, most consumers in these communities do not have access to financial services (Dupas et al. 2012; Soetan 2019; Soetan and Umukoro, 2023).

The absence of a high level of financial inclusion in any society implies financial vulnerability. Financial vulnerability can be conceptualised from both a personal perspective and a market structure perspective (Mogaji et al. 2020). On the one hand, the personal perspective occurs when an individual does not have access to financial services and as a result, cannot manage their transactions and bills effectively. Hence, these personal circumstances can force an individual to become financially vulnerable (Coppack et al. 2015). On the other hand, the market structure perspective relates to market contexts that limit access to financial services (CMA 2019). In emerging and developing economies, especially in Africa, there are high levels of institutional adversity (Parente et al. 2019). This is due to the absence of market-supporting institutions, lack of infrastructure and specialised intermediaries, weak government regulations, non-implementation of policies (Centre for Global Development 2018), high levels of market imperfections, low levels of financial literacy and education (Sashi 2010; Shah and Dubhashi 2015; Bongomin et al. 2016; Zins and Weill 2016), and poor communication and transportation services (Bayero 2015).

**Overview of financial inclusion in Nigeria**

Nigeria prides itself as the largest and most populous country in Africa with over 200 million people (World Bank 2021). Nationally, 40 percent of Nigerians (83 million) live below the poverty line while 25 percent (53 million) are vulnerable, and these vulnerable citizens can fall easily into poverty and live below poverty with COVID-19 outbreak (World Bank 2021). The financial services sector in Nigeria has been making significant contributions to the enhancement of financial inclusion in the country. The country boasts of 22 commercial banks, over 400 Microfinance banks, several licensed mobile money operators, and over 110,000 mobile money agents (MMAs) (Adesanya 2017). Nigeria’s financial inclusion landscape continues to grow, and it offers great hope even though there are several challenges such as insecurity and economic instability (Financial Inclusion Insights, 2021) to be contended with. In Nigeria, 60 percent of the population live below poverty and these people, who are mostly rural dwellers live in the rural areas are uneducated. 29 percent of the adult population in the country are digitally included through their banks because their banks offer digital services, 59 percent of the adult population have savings with their financial institutions while 63 percent of the adult population are gainfully employed (Financial Inclusion Insights, 2021).

Table 1. Data showing financial inclusion in Nigeria

<table>
<thead>
<tr>
<th>Registered Bank Accounts by Gender</th>
<th>Registered Bank Accounts by Locality</th>
<th>Registered Bank Accounts by Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women, 20%</td>
<td>Urban dwellers, 42%</td>
<td>Over $2/day, 45%</td>
</tr>
<tr>
<td>Men, 37%</td>
<td>Rural dweller, 23%</td>
<td>Less than $2/day, 18%</td>
</tr>
</tbody>
</table>

Source: Financial Inclusion Insights (2021)

From Table 1, the percentage of adult Nigerians who own a bank account shows that women are still in the minority with more men owning an account. This may be an offshoot of the patriarchal nature of the society which reflects in the cultural practices and religious beliefs that condemn women and girls to certain roles and responsibilities in the society based on their gender and age (Aidis et al. 2007; Drinkwater 2017). This gender bias limits their ability to make contributions to socio-economic development (Umukoro and Okurame 2017; Bako and Syed 2018) and reduces female participation in bank account ownership compared to men. This pattern, as expected also obtains in terms of the location of the people who own an account. They are mostly urban dwellers compared to the rural dwellers. This may be attributed to the insufficient spread of financial institutions, particularly in rural areas (MP and Pavithran 2014) and low adoption and use of mobile banking and MMAs in the rural areas (Yawe and Prabhu 2017). Also, regarding registered account owners, there are more people who make over $2/day who own an account with a financial institution in Nigeria compared to those who make less than $2/day as seen in Table 1. Sahoo et al. (2017) argue that there is a significant correlation between household income and bank account ownership. Indeed, the fact that those who make a higher income from Table 1 own an account compared to those on with lower income further confirms the position of Sarma and Pais...
(2011) who averred that those individuals with higher incomes tend to have formal bank accounts and are able to better take advantage of the benefits of financial inclusion compared to individuals who have low or irregular incomes.

The Nigeria Inter-Bank Settlement System (NIBSS) reported that in 2020, bank customers in Nigeria transferred N3.05 trillion through their mobile devices while e-payment transactions worth about N1.5 trillion were conducted. The NIBSS further reported that more bank customers in Nigeria continue to embrace the use of mobile devices to conduct transactions which shows that financial inclusion in Nigeria is growing. For example, as stated earlier, transactions worth N3.05 trillion were conducted by Nigerians in 2020 up from N828 billion in 2019 which showed an increase of 268% within a year (NIBSS 2020). The increase, obviously, is due to the COVID-19 pandemic that forced many bank customers to reduce their face-to-face transactions in line with lockdown policies and reduced operating hours by banks. In spite of the challenges caused by COVID-19, industry analysts contend that the growth in financial inclusion in Nigeria is an indication that the efforts to deepen financial inclusion in Nigeria by the CBN, and other financial institutions including banks, fintechs, and telecommunications companies continue to yield positive results (NIBSS 2021).

Financial Vulnerability

Customers can become financially vulnerable when they become unemployed and are unable to service their debts (De Clercq et al. 2019) or when they lack access to credit facilities from financial services providers such as banks (Sashi, 2010; Soetan, 2014; Soetan, 2020; Soetan and Umukoro, 2023). Many residents in emerging and developing economies are further disadvantaged by the lack of financial services which precludes them from realizing their life’s goals and ambition (Rosenbaum et al. 2017; Wayne et al. 2020). The concept of financial vulnerability applies to both organizations and individuals. An organization may experience financial vulnerability when it is likely to reduce its service offerings to customers and other stakeholders after experiencing a financial shock (Tuckman and Chang 1991). An individual may experience financial vulnerability when such an individual is denied access to financial services that are essential for human activities (Mogaji et al. 2021).

Customers can become financially vulnerable in various ways; however, these are typically grouped into two broad categories (CMA, 2019). Financial vulnerability may be due to the personal characteristics of customers or due to market structures that affect these customers. Personal characteristics such as physical disability, poor mental health, level of education, financial illiteracy, bad credit history, language barriers, lack of geographic and/or technological access to financial services and credit facilities, age, major life events such as the loss of a close relation i.e. bereavement, the breakdown of a relationship, or low income are associated to individual vulnerability and can affect their financial stability (Carbo et al. 2005; Lachs and Han 2015; Perrig-Chiello et al. 2016; Sashi 2010; Salignac et al 2019; Soetan 2019; Wayne et al 2020).

Market specific vulnerabilities include specific market contexts that affect disadvantaged and low-income earners who encounter challenges to financial inclusion, lack access to basic financial services thereby creating a critical equality deficit including specific market contexts that limit access to financial services (CMA 2019; Salampasis and Mention 2018; Wayne et al. 2020). Market specific vulnerabilities are more relevant to emerging economies including Nigeria due to several indicators of financial vulnerability that are related to their perceived economic outlook (The Personal Finance Research Centre, PFRC 2009). The macroeconomic indicators and outlook of a country using metrics such as Gross Domestic Product (GDP), GDP per Capita, unemployment rate, inflation, dis-inflation, stagflation, deflation, reflation, wages, income distribution, and household debts levels all influence the vulnerability of individuals, and put these individuals, citizens and residents of these countries at risk of social exclusion and financial exclusion (Fernández-Olit, Paredes-Gáezquez, and de la Cuesta-González 2018; De Clercq et al. 2019).

4. Theoretical Framework

Vulnerable Group Theory of Financial Inclusion

Literature reveals an increasing number of studies and findings on financial inclusion involving both policy research and academic research (Demirguc-Kunt et al 2018) although Prabhakar (2019) argued that there is still an absence of synergy between the policy and academic literatures of financial inclusion. A number of theories related to financial inclusion have been identified even though there are presently no elaborate theories of financial inclusion in the policy or academic literature (Ozili 2018). The theory of vulnerable group of financial inclusion argues that empowerment programs that enhance financial inclusion should be targeted at the vulnerable members of the society such as the poor, young people, unemployed/underemployed, women, physically challenged and elderly people who mostly suffer from economic hardship and crises (Mogaji et al.
One way of increasing the financial inclusion bracket to vulnerable people according to this theory is by extending Government-to-Person (G2P) social cash transfer to vulnerable people. The success of the G2P social cash transfer to this category of people encourages them to open a formal bank account in order to better take advantage of the benefits of the G2P initiative of the government which also helps to increase the financial inclusion bracket (Ozili 2020). The other benefits of this theory include its focus on vulnerable people by bringing them into the formal financial system as a way of enhancing financial inclusion. Also, the theory identifies vulnerable people based on certain attributes and/or characteristics such as income level, gender, age, and other demographic characteristics. The theory further argues that it is easier to enhance financial inclusion by targeting the vulnerable people in the society who live mostly in the rural areas rather than the entire population (Ozili, 2020).

The interplay of the participants who are involved in the attainment or enhancement of financial inclusion is illustrated in Figure 1. According to the figure, financial institutions are expected to promote a proximodistal pattern of increasing financial inclusion in the society. Financial institutions which include both banks and non-banks have marketing strategies, services, and programs to attract vulnerable customers who are mostly the poor, low-income earners, women and youth into the financial inclusion bracket. These financial institutions also ensure that they continue to come up with different initiatives, services, and programs that continue to engage non-vulnerable customers (Mogaji et al. 2021) who include gainfully employed workers, salary earners, and entrepreneurs to continue to enjoy the benefits that accrue to customers who are gainfully employed. That is in addition to ensuring that vulnerable customers who have been drawn into the financial inclusion bracket remain there through programs such as financial literacy, education, and other training seminars that would sustain their interest in financial inclusion services.

As financial inclusion continues to gain momentum in Africa's policy and economic development (Beck et al. 2015), this study aims to make theoretical and empirical contributions to the small but rapidly growing academic literature on financial services inclusion in Africa. In addition, this study aims to provide managerial insights for policymakers on improving financial inclusion and insights for financial services managers on product development through appropriate services research.

**Transformative Service Research**

Customers often behave differently than expected when they are satisfied with the services that they are provided with by their service providers (Jones and Sasser 1995). Conversely, customers have also been known to switch service providers even when they reported higher levels of satisfaction (Keaveney 1995). This reality which suggested that customer satisfaction alone may not guarantee a company’s success led to a gap in marketing strategy. Literature reveals that customers’ delight is closely connected to results or outcomes such as repeat purchases and positive word of mouth marketing (Barnes et al. 2021; Finn 2005; Oliver et al. 1997) and customers’ delight or satisfaction has a multiplier effect that ultimately improves the emotion, mood, attitudes, and perspectives of customers (Barnes et al. 2015; Guidice et al. 2020; Nasr et al, 2014).

The Transformative Service Research (TSR) hypothesis assesses customer happiness in terms of the service offers that they receive from their service providers, which provides insight into the extent to which service providers prioritize the satisfaction of customers. According to Fiske (2008), the needs of consumers might be affective or interpersonal. Customers’ desire and behaviour are influenced by the affective character of their
wants, whereas the interpersonal nature of their needs informs their experiences, notably pleasant interactions that lead to positive emotions and feelings (Baumister and Leary 1995; Beckman 1981). Customers’ wants can also be cognitive, which refers to their need to comprehend, interpret, and anticipate the context of events and interactions (Fiske 2008). The service experience meets customers' cognitive demands by giving them a sense of control over their position during a crisis situation (Radel et al. 2013), notably during the COVID-19 pandemic (Soetan et al. 2021).

Transformative Service Research and Financial Inclusion

Transformative Service Research (TSR) investigates how certain elements of the services provided influence customers' overall well-being at every level of interaction - individual, collective, community, or societal - where they carry out their financial activities (Anderson and Ostrom 2015; Anderson et al. 2013). Despite calls for financial service providers, including banks, to focus on how their financial products and services optimize their customers' well-being (Rosenbaum et al. 2011), customers in emerging and developing economies face challenges such as limited access to the internet and electricity, in addition to the necessity of commuting vast distances to perform financial activities due to an insufficient distribution of bank locations, all of which has been exacerbated by the COVID-19 epidemic. This emphasizes the critical necessity for significant revolutionary transformations through TSR. Indeed, the COVID-19 global crisis, which no country is immune to, indicated that customers tend to respond better to services that address their eudaimonic rather than hedonic requirements (Moorman and McCarthy 2020). Although research has linked the fulfillment of hedonic requirements to customer well-being, which eventually leads to customer joy, most studies have focused on positive situations, suggesting that they can only be transferred to challenging contexts (Barnes et al. 2021). As a result, eudemonic requirements are more prominent in times of crisis, such as the current COVID-19 outbreak. As a result, providers of financial services, particularly financial institutions, are more likely to prioritize addressing eudaimonic demands over hedonic requirements (Barnes et al. 2021).

TSR has historically been viewed as a function of both eudaimonic and hedonic demands, when viewed from the context of consumer well-being (Anderson et al. 2013; Ryan and Deci 2001). Eudaimonic well-being refers to experiences associated to a sense of purpose and meaning, such as living a fulfilled life in terms of self-actualization, personal expressiveness, wellness, and vitality, whereas hedonic well-being refers to fulfillment deriving from happiness and fulfillment. Mogaji et al. (2020), Wayne et al. (2020), and Oluwatayo (2013) believe that introducing financial technology such as mobile banking is an effective approach to improve customer fulfillment via financial inclusion. It is therefore critical to investigate the impact of TSR on bank customers' satisfaction with financial services in a growing country like Nigeria, in terms of the usage and quality of financial inclusion, access to credit facilities, and the urban-rural divide in this aspect of financial inclusion. In an effort to fill this void, this study conducts quantitative research on the significance and influence of TSR on financial inclusion in Nigeria in order to first understand customers' experiences, secondly understand bank managers' experiences, and thirdly emphasize the potential of collaborating on a transformative service that guarantees customer satisfaction via financial inclusion. This study, in particular, highlights the importance of TSR for financial service design in an emerging economy where customers face a slew of challenges on a daily basis, exacerbated by COVID-19, in financial service providers' efforts to meet the requirements of their consumers and improve their financial condition.

5. Research Methods

Design

The cross-sectional study was conducted in one of the largest cities in Africa with specific emphasis on an urban and a rural population. The variables of interest included financial inclusion and cost of financial inclusion. Financial inclusion was defined as the availability and equality of opportunities to access financial services among a populace. Cost of financial inclusion describes the financial implication of utilizing resources of financial inclusion. The samples were collected between November 18 and December 8, 2021. The urban sample was obtained from a major urban setting in the city while the rural sample was obtained from the outskirts of the city. The study sample was made up of 453 participants with 46.8% of them being rural residents and 53.2% being urban residents. The sample comprised of more male (60.9%) participants than their female counterparts with ages ranging from 18 to 60 years and a mean age of 37.9. Non-probability sampling methods were used to derive the study sample, which included a combination of purposive and convenient sampling. The justification for adopting non-probability sampling methods stemmed from the limited control over a sampling frame for members of the general public.
**Measures**

A structured questionnaire was developed and utilized in eliciting relevant information from the study participants. The questionnaire was made up of three sections; the first section contained items that described the socio-demographic characteristics of the respondents. The second and third sections contained items that measured financial inclusion and cost of financial inclusion respectively. The scales for measuring these variables of interest were developed by the researchers through an in-depth review of the literature on financial inclusion from a culturally relevant perspective. Standardization of the scales was obtained via a pilot study and item analysis procedure.

Financial inclusion was measured along 3 dimensions (i) Access to financial inclusion services (ii) Quality of financial inclusion services; and (iii) Usage of financial inclusion services. Five items were used to rate the first dimension based on a ‘yes’ or ‘no’ response format. Sample items included ‘I own a functional bank account’ and ‘I know my bank’s USSD code for financial transactions’. The second dimension was measured using a 5-item scale with a 5-point response format ranging from ‘1=strongly disagree’ to ‘5=strongly agree’. Sample items included ‘there are several POS units in my area of residence’ and ‘my bank branch is proximally available in my home environ’. The third dimension was measured using a 7-item scale with a 5-point response format ranging from ‘1=Never’ to ‘5=Always’. Sample items included ‘How often do you use POS units for transactions?’ and ‘How often do you use bank USSD codes for transactions?’ A reliability of .76 was obtained as a composite coefficient for the financial inclusion scale.

Perceived cost of financial inclusion was measured based on a 3-level rating (Low, Moderate and High) of the service charges incurred for utilizing financial inclusion platforms such as ATMs, POS, Bank Apps etc. A list of relevant financial platforms was provided for the respondents. A Cronbach alpha of .71 was obtained for the scale.

**Data Collection Procedure**

Ethical approval to conduct the research in the study area was duly obtained from the University research ethics board where the research was conducted. The researchers then liaised with 10 willing research assistants to administer the questionnaire. The research assistants are university graduates in the country. The research assistants were intimated about the study and given adequate training on the questionnaire administration and data collection process. The services of the research assistants were incentivized. The research assistants were given adequate introductory letters and identification credentials for the purpose of the study. The administration of the questionnaire was done on a house-to-house basis in which one questionnaire was expected to be administered to one member of each of the households visited.

The research assistants were paired up such that each pair of research assistants was tasked with visiting 50 households in their designated survey areas. Household heads (if available) or any adult member of the household was to complete the instrument. After brief introductions, the research assistants explained what the study was about and provided opportunities for prospective respondents to ask clarification questions related to the study. Participation was completely voluntary. Respondents who gave verbal consent to participate in the study were then given a copy of the questionnaire for immediate completion. Participants were assured of the confidentiality of their participation and responses. They were also implored to provide sincere responses in order to enhance the external validity of the study outcomes. Completed questionnaires were retrieved on site by the research assistants. Out of the 500 copies of the administered questionnaire, 453 of the retrieved copies were deemed adequate for further data analysis.

**6. Data Analysis**

The 453 copies of the questionnaire were coded and input into a current version of the SPSS software. Descriptive statistics such as frequency distribution and percentages were used to analyze the demographic characteristics of the respondents while inferential statistics such as the factorial ANOVA was used for the hypotheses testing at 0.05 level of significance.

**Test of Hypotheses**

Three hypotheses were formulated and tested for this study. The analysis of variance (ANOVA) was used for the hypothesis testing. A summary of all hypotheses tested are presented as follows

**Hypothesis One**

There will be a significant main and interaction effect of residential status and perceived cost of financial inclusion on access to financial inclusion services. This hypothesis was tested using a 2x2 factorial ANOVA. Results are presented in Table 2.
Table 2a. Summary of 2x2 factorial ANOVA showing main and interaction effect of residential status and perceived cost of financial inclusion on access to financial inclusion services

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>140.817*</td>
<td>3</td>
<td>46.939</td>
<td>15.291</td>
<td>.000</td>
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<td>Intercept</td>
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<td>1</td>
<td>3938.944</td>
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<td>.000</td>
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<td>Residential Status (R)</td>
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<td>Perceived Cost of Fin Inclusion (PC)</td>
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<td>1</td>
<td>3.133</td>
<td>1.021</td>
<td>.313</td>
</tr>
<tr>
<td>R * PC</td>
<td>1.484</td>
<td>1</td>
<td>1.484</td>
<td>.483</td>
<td>.487</td>
</tr>
<tr>
<td>Error</td>
<td>966.939</td>
<td>315</td>
<td>3.070</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5377.000</td>
<td>319</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>1107.755</td>
<td>318</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DV: Access to financial inclusion services

Results from Table 2a show that there is a significant main effect of residential status on access to financial inclusion services \( F(1, 315) = 42.215; p<.05 \) while perceived cost of financial inclusion had no significant main effect on accessibility to financial inclusion services \( F(1, 315) = 1.021; p>.05 \). Furthermore, the interaction effect of residential status and perceived cost of financial inclusion on accessibility to financial inclusion services was not significant \( F(1, 315) = .483; p>.05 \). The hypothesis stated is therefore partially accepted due to the main effect of residential status. The direction of effect is presented in the summary of estimated marginal means below.

Table 2b. Summary of estimated marginal mean

<table>
<thead>
<tr>
<th>Residential Status</th>
<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Rural</td>
<td>3.160</td>
<td>.123</td>
<td>2.918</td>
</tr>
<tr>
<td>Urban</td>
<td>4.560</td>
<td>.177</td>
<td>4.212</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Upper Bound</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3.402</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4.908</td>
</tr>
</tbody>
</table>

DV: Access to financial inclusion services

Results from Table 2b show that residents in the rural setting reported lower (\( \bar{x} =3.160 \)) accessibility to financial inclusion services, while residents in the urban setting reported higher (\( \bar{x} =4.560 \)) accessibility to financial inclusion services. The results suggest that financial inclusion among the rural populace may be significantly hampered by the lack of accessibility to financial inclusion services.

Hypothesis Two

There will be a significant main and interaction effect of residential status and perceived cost of financial inclusion on quality of financial inclusion services. This hypothesis was tested using a 2x2 factorial ANOVA. Results are presented in Table 3.

Table 3. Summary of 2x2 factorial ANOVA showing main and interaction effect of residential status and perceived cost of financial inclusion on quality of financial inclusion services

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>22.047</td>
<td>3</td>
<td>7.349</td>
<td>.994</td>
<td>.396</td>
</tr>
<tr>
<td>Intercept</td>
<td>120975.710</td>
<td>1</td>
<td>120975.710</td>
<td>16371.271</td>
<td>.000</td>
</tr>
<tr>
<td>Residential Status (R)</td>
<td>.075</td>
<td>1</td>
<td>.075</td>
<td>.010</td>
<td>.920</td>
</tr>
<tr>
<td>Perceived Cost of Fin Inclusion (PC)</td>
<td>21.935</td>
<td>1</td>
<td>21.935</td>
<td>2.968</td>
<td>.086</td>
</tr>
<tr>
<td>R * PC</td>
<td>2.247</td>
<td>1</td>
<td>2.247</td>
<td>.304</td>
<td>.582</td>
</tr>
<tr>
<td>Error</td>
<td>2327.696</td>
<td>315</td>
<td>7.390</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>147388.000</td>
<td>319</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>2349.743</td>
<td>318</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DV: Quality of financial inclusion services

Results from Table 3 show that there is no significant main effect of residential status \( F(1, 315) = .010; p>.05 \) and perceived cost of financial inclusion \( F(1, 315) = 2.968; p>.05 \) on the quality of financial inclusion services. Similarly, the interaction effect of residential status and perceived cost of financial inclusion on the quality of financial inclusion services was not significant \( F(1, 315) = .304; p>.05 \). The hypothesis stated is therefore rejected. The results imply that participants’ reports of the quality of financial inclusion services did not vary irrespective of urban-rural differentials and perceived cost of financial inclusion.

Hypothesis Three

There will be a significant main and interaction effect of residential status and perceived cost of financial inclusion on usage of financial inclusion services. This hypothesis was tested using a 2x2 factorial ANOVA. Results are presented in Table 4.
Table 4a. Summary of 2x2 factorial ANOVA showing main and interaction effect of residential status and perceived cost of financial inclusion on usage of financial inclusion services

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III SS</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>6165.647a</td>
<td>3</td>
<td>2055.216</td>
<td>37.280</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>134278.537</td>
<td>1</td>
<td>134278.537</td>
<td>2435.698</td>
<td>.000</td>
</tr>
<tr>
<td>Residential Status (R)</td>
<td>9.927</td>
<td>1</td>
<td>9.927</td>
<td>.180</td>
<td>.672</td>
</tr>
<tr>
<td>Perceived Cost of Fin Inclusion (PC)</td>
<td>5339.682</td>
<td>1</td>
<td>5339.682</td>
<td>96.857</td>
<td>.000</td>
</tr>
<tr>
<td>R * PC</td>
<td>.719</td>
<td>1</td>
<td>.719</td>
<td>.013</td>
<td>.909</td>
</tr>
<tr>
<td>Error</td>
<td>17365.757</td>
<td>315</td>
<td>55.129</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>200193.000</td>
<td>319</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>23531.404</td>
<td>318</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DV: Usage of financial inclusion services

Results from Table 4a show that there is a significant main effect of perceived cost of financial inclusion on usage of financial inclusion services \([F_{(1, 315)}= 96.857; p<.05]\) while residential status had no significant main effect on usage of financial inclusion services \([F_{(1, 315)}= .180; p>.05]\). Furthermore, the interaction effect of residential status and perceived cost of financial services on usage of financial inclusion services was not significant \([F_{(1, 315)}= .013; p>.05]\). The hypothesis stated is therefore partially accepted due to the main effect of perceived cost of financial inclusion. The direction of effect is presented in the summary of estimated marginal means below.

Table 4b. Summary of estimated marginal means

<table>
<thead>
<tr>
<th>Perceived Cost of Fin Inclusion (PC)</th>
<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>18.044</td>
<td>.726</td>
<td>16.616</td>
<td>19.472</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>27.032</td>
<td>.554</td>
<td>25.941</td>
<td>28.123</td>
<td></td>
</tr>
</tbody>
</table>

DV: Usage of financial inclusion services

Results from Table 4b show that participants with perceptions of high cost of financial inclusion reported lower usage \((\bar{x}=18.044)\) of financial inclusion services, while participants with perceptions of low cost of financial inclusion reported higher usage \((\bar{x}=27.032)\) of financial inclusion services. The results suggest that usage of financial inclusion services among the populace may be significantly hampered by the cost of financial inclusion services.

7. Empirical Framework

The empirical framework obtained from the results are presented in figure 2 which shows three models of the main and interaction effect of residential status and perceived cost of financial inclusion across the three domains of financial inclusion.

![Figure 2. Predictive Model of Financial Inclusion across Access, Quality, and Usage](image-url)
The framework in figure 2 is depicted by text boxes and arrow-headed lines. The text boxes to the left highlight the independent variables (i.e., residential status and perceived cost of financial inclusion) while the text boxes to the right highlight the dependent variables (i.e., dimensions of financial inclusion). The thick arrow-headed lines show the direction of interaction effects while the narrow arrow-headed lines show the direction of main effects. The dotted lines show non-significant effects while the complete lines show significant effects. Outcomes as depicted by the empirical framework show that residential status has a significant main effect on access to financial inclusion services while perceived cost of financial inclusion has a significant main effect on usage of financial inclusion services.

8. Discussion of Findings and Conclusion

Outcomes from the study analyses show that residents in the rural setting reported lower accessibility to financial inclusion services, while residents in the urban setting reported higher accessibility to financial inclusion services. In simple terms, the results suggest that accessibility to financial inclusion hubs such as bank, ATM points and POS units was limited in rural areas due to their relative unavailability when compared to urban areas. It may be implied that rural communities are highly under-served as regards financial inclusion services, irrespective of the numerous financial institutions that are invested in the economy. This divide in rural-urban differentials of financial inclusion services have left a major lacuna in the financial inclusion status of the country and have created an avenue for informal players to take advantage of this deficit in rural areas. Thus, informal and non-skilled financial entities have begun to provide financial services in many rural locations (Oluwoy and Audu 2019). For instance, the culture of money lending by individuals as a business venture still thrives in many rural areas in both emerging and developing markets.

While some positives may be identified from the activities of such informal financial institutions in rural areas, their weak institutional and managerial capacities, as well as their isolation from the financial system pose significant limitations with huge ramifications. It is therefore suggested that financial institutions should be proactive in identifying the benefits of extending financial inclusion services to rural areas in Nigeria. Many rural economies in Nigeria are characterized by needs to purchase agricultural inputs, obtain veterinary services, maintain infrastructure, contract labor for planting/harvesting, transport goods to markets, make/receive payments, manage peak season incomes to cover expenses in low seasons, invest in education, shelter, health, or deal with emergencies. Therefore, investing in financial inclusion services in rural areas will not only be a viable long run investment for financial institutions, but will also expand the horizon for development in such areas.

Furthermore, it was found that participant reports of the quality of financial inclusion services did not vary irrespective of urban-rural differentials and perceived cost of financial inclusion. The results suggest that the quality of the financial inclusion services that could be obtained in rural areas was not different from that which was obtainable in urban settings. This is justified by the fact that the same models of financial inclusion services which are used by service providers function at per irrespective of their location or perceived cost. For instance, an ATM machine would function as well as it should in both urban and rural areas. However, it was found that such financial inclusion services recorded lower usage in rural areas than urban areas due to their perceived cost of usage. Thus, the charges incurred for utilizing financial inclusion services, may seem negligible for an urban populace, but are deemed expensive for a rural populace. This is obviously due to class disparities between rural and urban populace; with the affluent society clustered in urban settings and the masses in rural settings. It may therefore prove worthwhile for financial institutions to consider locational differences in ascribing service charges for financial inclusion services. This is a possibility which can be exploited with technological advancements in identifying mapped coordinates of financial inclusion platforms and usage locations.

This study makes significant contribution to existing body of work on financial services provision and transformative service research for enhancing financial inclusion. Specifically, the study highlights the inherent challenges of financially excluded consumers and the huge benefits through financial services design and innovation that can alleviate these challenges (Mogaji et al. 2021, Soetan et al. 2021). In addition, with a focus on financial services and inclusion in Nigeria, the study has provided theoretical and empirical insights into financial services provision and inclusion from a developing and emerging economies’ perspective. While it is acknowledged that there are people in the developed world who are still excluded in spite of the abundance of services around them, customers in Nigeria and possibly other developing and emerging economies have a unique characteristic that shapes their experience of financial inclusion. Importantly, banks and other financial service providers have a role to play in engaging with the financially vulnerable individuals and providing services that meets their needs. The study also contributes to the transformative service research agenda, specifically by focusing on the transformative role of financial services in improving the overall wellbeing of an individual (Ungaro et al. 2021). Findings of the study confirm the notion that if consumers are financially
included, they are empowered to make financial decisions which can enhance their lives and those of their immediate family (Beck et al. 2015, Mogaji et al. 2020; MP and Pavithran, 2014, Ozili, 2018, Salampasis and Mention, 2018, and Soetan et al. 2021; Soetan and Umukoro, 2023).

There are key managerial implications for stakeholders, especially the banks and financial services providers, policy makers, social enterprises, and charity organizations working on improving financial wellbeing of people. Bank managers are expected to intensify their efforts in ensuring consumers are integrated into the financial system. This involves creating banking products that are targeted toward individuals and prospective customers who are financially excluded. It is also necessary to educate prospective customers about different offers, to streamline their account opening processes, and use technology to ease their business operations. The effort of the Central Bank of Nigeria is recognized in reducing the number of financially excluded persons, but there is more to be done with regards to policies that will align the efforts of the banks, fintech developers, and other stakeholders within the industry.

Specifically, considerations should be made around the bank charges that discourage people from using banking services, and ideas for open banking which allows customers to explore service offerings from other banks, and a streamlined database which can be the basis of credit file and records. Social enterprises and charity organizations also have a role to play in creating awareness about the inherent challenges around financial inclusion. By working in partnership with banks, fintech developers, and policymakers, they can educate people about financial inclusion, financial education, and financial management. Consumers need to be educated about different bank accounts, different forms of borrowing, and credit facilities that are available. This education can start from secondary school in both rural and urban areas which would allow consumers make an informed decision about their finances. This will further highlight the transformative role of financial services in improving lives.

This study provides some tentative support to the argument that financial inclusion has a positive impact on individuals who reside in both the rural and urban areas of an emerging economy. This positive impact also contributes to the economic development of the country since financial inclusion makes a significant contribution to the financial empowerment of individuals. Furthermore, this study provides a tentative support to the assertion that residents of urban areas experience a higher level of financial inclusion compared to residents of rural areas due to the low or limited presence of financial services providers in rural areas. While there are several other factors apart from the presence of financial services providers that may influence financial inclusion, the evidence in this study lends support to a significant relationship between presence of financial services providers and financial inclusion (Soetan, 2014). Finally, this study reiterates the role and importance of transformative service research on financial inclusion in the efforts toward the attainment of the 2030 SDGs.

Since this study took place in one of the south western states of an emerging economy, Nigeria, it will be important to see if other studies are extended to other parts of the country will come up with similar findings. It will also be interesting to see if a qualitative study will provide similar or different results to the findings of this study as well.

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Not Applicable

Authors contributions
Dr. Soetan and Dr. Umukoro were responsible for the study design. Dr. Umukoro was responsible for data collection and analysis. Dr. Soetan and Dr. Hassan drafted the manuscript. Dr. Hassan revised and edited the manuscript. All authors read and approved the final manuscript.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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**Data availability statement**

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

**Data sharing statement**

No additional data are available.

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