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Digital transformation in the financial service sector: implications for sustainable development in Nigeria

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ABSTRACT

Digital transformation is a novel and frequently misinterpreted phenomenon. Several institutions, companies, customers, and regulators in the financial services sector are currently grappling with digital transformation, especially with the advent of financial technologies (Fintech). In recent times, the upsurge in the application of Fintech has had a tremendous impact on how financial services are provided to society. Yet, there exists a gap in the literature as to the actual meaning and nature of digital transformation in this sector. In this study, data from semi-structured and unstructured interviews with experts and practitioners in the financial services sector in Nigeria will be qualitatively synthesized to inductively build a theoretical framework and model for digital transformation. From the model and framework, an expanded knowledge on the digital transformation of the financial services sector in Nigeria will be derived. The insight will succinctly make sense of factors that drive digital transformation, capabilities that are digitally transformed, and processes of transformation, including tangible and intangible impacts resulting from the transformation. Furthermore, the implications of the digital transformation of financial services will be evaluated in terms of how sustainable development is framed and understood in Nigeria. Researchers can apply the framework to structure their work and have a clearer picture of digital transformation's extensive scope and impacts or replicate the study in other contexts or industries to decipher its applicability. In addition, regulators, and practitioners (e.g., banks, insurance, and Fintech companies) may also apply the model to formulate policies and refine their products/services respectively.

Keywords: Digital transformation, disruptive innovation, fintech, banking, financial services, sustainable development

1. INTRODUCTION

Digital transformation is an emerging phenomenon that is attracting significant interest from industry and academia (Morakanyane, Grace and O'Reilly, 2017). Several enterprises are still grappling with digital transformation and its impacts (Parviainen et al., 2017). Despite the staggering amount of literature on the phenomenon, there is no consensus on what it means (Goerzig and Bauernhansl, 2018; Vial, 2019). This is especially evident in the financial services sector with the emergence of the Fintech innovation. In recent times, the upsurge in the application of financial technologies (Fintech) has had a tremendous impact on how financial services are provided to society (Palmié et al., 2020).

Imran et al. (2021) defined digital transformation as an amalgamation of cutting-edge technologies and organizational practices to facilitate key business developments for example improved services and products, competitive advantage, enriched customer experiences, business model revolution, andnovel business processes. Digital transformation is a complete overhaul of processes, activities carried out in a business and/or organization with the use of digital technologies (ElMassah and Mohieldin, 2020). Digital transformation involves the use of new technologies to fundamentally enhance the performance of an organization, and possess the potential to invigorate economic development, and reduce inequalities amongst countries in Africa and other nations in the world (Olayinka , Olakunle and Wynn, 2021). Based on the review of 282 literature journals, Vial 2019) defined digital transformation as "*a process that aims to improve an entity by triggering significant changes(to its properties through combinations of information, computing, communication, and connectivity technologies*" Pg. 118.

Digital transformation involves the application of digital technologies to create and transmit value to customers (Morakanyane, Grace and O'Reilly, 2017; Goerzig and Bauernhansl, 2018). In thefinancial services sector, value is being created when financial services can be accessed by the unbanked especially in rural areas. Value is created when people with one form or disability or the other can have access to financial services from the comfort of their homes without being at the mercyof so called "able-bodied" persons or individuals. With Fintech, they can transact business as if theyare in a bank for example by opening their account, making payments, applying for loans, and investing in different financial vehicles.

Stolterman and Fors (2004) posited that digital technologies impacts all facets of the human life. Parviainen et al. (2017) reiterated this assertion by affirming that digital transformation has facilitated diverse kinds of changes in all areas of society. Ebert and Duarte (2018) argue that digital technologies are driving incessant changes into every fabric of the society. Society transformation is one of the core elements proposed by (van Veldhoven and Vanthienen, 2020) in their digital transformation framework. The transforming effects of digital transformation should therefore target the larger society beyond an organization or a single entity. Aly (2020) described digital transformation as the employment of digital technologies (such as telecommunications networks, computer technologies, software engineering etc.) in an organization that ultimately culminates in the creation of value to the consumers. The results of Aly's research suggest a positive correlation between digital transformation and economic development in a set of developing countries. On their part, Ndemo and Weiss (2017) described digital transformation as the effect and the revolution brought about by digital technologies on the society; the authors added that the phenomenon is spreading widely in Africa. In effect, digital transformation can contribute significantly to sustainable development of the society.

Lele (1991) describes sustainable development as a new mode of life and approach to social and economic activities for all societies, rich and poor which is harmonious with the preservation of the environment. According to Adejumo and Adejumo (2014), sustainable development is a cost-effective management of resources for the survival of human beings now and for the future. In a UN report titled "Transforming our world: the 2030 Agenda for Sustainable Development", the world leaders at the 70th Session of the United Nations General Assembly in September 2015 adopted the 2030 Agenda for Sustainable Development, and defined 17 Sustainable Development Goals (SDGs), 169 targets and 230 key performance indicators. The 2030 Agenda for Sustainable Development visualize a future and present that is economically sustainable, environmentally resilient, and socially encompassing.

Access to financial services is an indicator of economic growth as stated in one of the UN SDGs (Jones, Hillier and Comfort, 2016). Demirguc-Kunt et al. (2018) carried out a global study on how having access to financial services can contribute to inclusive economic growth using related empirical evidence. Siddik, Ahsan and Kabiraj (2019) supported this assertion by examining the impact access to financial services can have on economic growth in the Asian region. To establish their hypothesis, the authors collected data on 24 Asian economies for the period between 2004 and 2016. Their findings revealed that access to financial services promote the economic growth of Asian countries. Agbelusi (2018)opined that without access to financial services, the economy may not do well because savings are not where they can be used for investment purposes, thereby increasing the cost of borrowing.

In recent times, it is becoming clearer that revolutions and innovations in the digital space will be key to the achievement of the sustainable development goals defined by the UN in 2015 (Bajpai and Biberman, 2021). The authors opined that current innovations have the capability to alter the blueprint of infrastructure and urbanized environments, provide the foundation for equitable, superior health and education systems, and re-specify how resources are utilized and apportioned amongst ecosystems. Reis et al. (2018)concluded that with the growth of new digital technologies like social networks, mobile, big data, etc., corporations, in virtually all industries, are deploying several initiatives to explore and exploit the gains from these technologies. As a result, the global society is going through an accelerated and revolutionary change due to the upsurge in digital technologies.

Digital transformation in financial services has created a platform for financial inclusion where the unbanked can also be reached to reap the benefits of savings, investment, ease of payments and other financial services to support their daily lives (Abdulquadri et al., 2021). Fintech, as an evolving concept linked with the digital transformation of financial services, is powered via information and communication technologies (ICT) (Breidbach, Keating and Lim, 2020). Financial technology is the application of technology to make available financial services like payments, savings, micro-credit etc., and it is an essential instrument to reduce poverty and drive the growth of the economy (Agbelusi, 2018) . Broby (2019) describes Fintech as a section of digital financial business models that is innovatively driven by technologies such as artificial Intelligence, analytics, machine learning etc. providing better, cheaper, and increased access to financial services to the society. Fintech can enhance access to financial services in West African economies by facilitating loans at a lower interest rate amongst other benefits (Koffi, 2016). Kola-Oyeneyin, Kuyoro and Olanrewaju (2020) argued that Fintechs have come up with different innovations to develop and extend affordable financial products and services to many Nigerians, thus enhancing the country's economy and pushing it towards the achievement of its SDGs.

The financial industry has been profoundly affected by digitalization occasioned by the emergence of FinTech, which is an amalgamation of "finance" and "technology" (Zavolokina, Dolata and Schwabe, 2016). The authors believe that FinTech enables the establishment of new financial business models and services which facilitates the empowerment of individuals by making information and financial services accessible. The emergence of Fintech innovation has largely disrupted the finance industry extending financial services to many individuals that are unable to get access to financial products, thus affecting the way people make payments, transfer money and lend (Anshari, Almunawar and Masri, 2020).

2. RESEARCH OBJECTIVES

This research will attempt to demystify the phenomena especially as it relates to the financial services sector in Nigeria. There appears to be little or no empirical evidence to demonstrate the manner practitioners and experts in the financial services sector in Nigeria are presently defining digital transformation in their practices as related to the emergence of Fintech. The aim of this study is to understand the meaning that stakeholders in the financial services sector in Nigeria attribute to the concept of digitaltransformation vis-à-vis Fintech and offer deep insights from their experiences and expectations.

Therefore, the study will endeavor to answer the following research questions:

How is digital transformation operationalized through Fintech in the financial services sector in Nigeria?

W*hat are the implications of the digital transformation of financial services for sustainable development in Nigeria?*

Consequently, the objectives of this research are as follows:

a. To explore digital transformation as socially constructed by practitioners, experts, and other stakeholders in the financial services sector in Nigeria.
b. To develop a theoretical framework for digital transformation in the financial services sector that could lead to the definition of a new compound nomenclature in the literature "***Fintech Transformation***" which essentially means digital transformations that happen through Fintech.
c. To evaluate the implications of digital transformation of financial services on sustainable development in Nigeria.

3. LITERATURE REVIEW

3.1 Nigeria's financial service sector

Nigeria's population is estimated to be about 200 million, making it the country with the largest population in Africa yet only 40% of the adult population enjoys financial services (Demirguc-Kunt et al., 2018). Besides, David-West (2016) stated that Nigeria has the largest economy in the whole of Africa. The implication of the statistics is that a whopping 60% of the adult population in the country does not have access to financial services. This is quite shocking and alarming.

The Nigerian financial services sector, which consists of both banking and non-banking enterprises, is arguably the largest in the global south (Unurhoro and Dennis Efemuaye, 2022). This underscores the importance of the sector to the economy of Nigeria. According to Agbo (2018), the sector comprises of banking institutions and capital/money market operators, and it is a very essential component of the economy in both developing and developed countries of the world. In contributing to the discourse, Soetan, Mogaji and Nguyen (2021) asserted that financial services are undoubtedly some of the major drivers of any economy. Without access to financial services, it will be quite difficult for the economy to grow given the fact that financial services drive payments which is a bedrock of a nation’s economy. In other words, it will be practically impossible for buyers and sellers to exchange value without the backbone of payment systems umpired by the financial services sector. Giving the foregoing, as the most populous nation in black Africa, Nigeria should be able to use the powers of its numbers to propel economic growth, create prosperity for its people, and fast-track acceleration towards the realization of its SDGs.

Payment is an integral part of financial services. The phenomena dates to the days where the trade by barter system was used to measure the exchange of value (Demirkol et al., 2011). This system of payment is where goods are offered as a means of payment in exchange for another one of a perceived similar value. Imagine if that still subsists in a 21st-century economy, there would have been chaos in an unfathomable manner. Yet, payment is only one of the services offered in the financial services sector. Ultimately, all these services should play key roles in the growth of the economy of a nation. Czarnecka and Mogaji (2020) opine that money plays a vital role in the everyday living of individuals and corporate entities. For instance, in the bank, customer’ accounts are broadly divided into two main groups namely personal and corporate.

In a cash dominated economy like Nigeria, cumulative amount of cash withdrawn daily may run into billions of Naira (unit of currency in Nigeria) despite the pegging of maximum amount withdrawable by individuals to N500,000.00 (Bayero, 2015). The amount of cash withdrawn per day by corporate customers should ideally be far higher than private individuals given the fact that corporate bodies run bigger volume of transactions depending on the size of the organization. On the other hand, electronic transfers in Nigeria increased from 142.80 billion in 2013 to N346.47 billion in 2014 (Orji et al., 2018). The possible logical question that may follow from the above analysis is “What is this huge amount of money used for?” Attempt to answer this simple question may provide an insight into how money drives the economy. Essentially, without the movement of money, an effective discussion on economy is a mirage. Every industry in an economy virtually runs on money. Customers pay money to receive goods, manufacturers pay their suppliers money to enable them to procure raw materials to produce those goods. Consumers pay their service providers for services, the service providers in turn pay their staff that help them produce those services for consumption. Governments pay huge amounts of money to construction companies to create roads and infrastructure, the construction companies in turn pay their workers and suppliers to get the job done.

From the manufacturing industry to the construction industry, to the entertainment industry, to the clothing/fashion industry, to the Oil & Gas industry, to the Government: - they all rely on financial services to thrive in their businesses. This may probably explain why there are several technology payment service providers springing up in the Fintech space in Nigeria where providers like Paga, Paystack, Interswitch, Cellulant and Opay are dominating the scene (Kola-Oyeneyin, Kuyoro and Olanrewaju, 2020a) In essence, the financial services seem to be the engine driving the economy. Painting a scenario where no money move in the economy may provide a clearer view to further underscore the importance of financial services. Fig 2.1 below briefly describes how money flows in an economy. Money flows from household to companies through purchase of goods and services consumed. Companies in turn employ members of household in the production of goods and services and pay them. Besides, money flows out from household and companies when they save and invest in the financial markets respectively. In addition, there is an outflow of funds when household pay taxes to the government. Furthermore, money flows when import and export transactions are carried out at international markets.

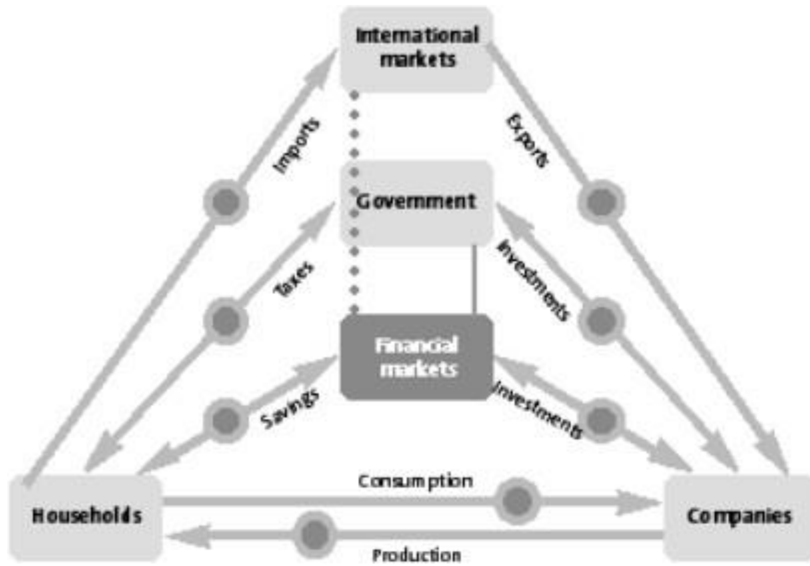

Figure 1 : ***How money flows in the economy*** **Source**: (Jeucken and Bouma, 2017)

Over the years, the Central Bank of Nigeria (CBN) in collaboration with banks have come up with several initiatives to attract more people to use financial services. Such initiatives include lowering the requirements for opening bank accounts, creating incentive schemes to encourage savings, and establishing a regulatory framework to discourage use of cash by enacting cashless polices (Bayero, 2015). For instance, the barrier for opening a basic tier level 1 account was lowered by requesting for only a bank verification number and passport photo as the know-your-customer (KYC) requirements. Whereas a few years back, the KYC requirements include a long list of documents thatcan deter an applicant from proceeding with opening an account since he or she does not possess most or all the requested documents. The CBN mandated the implementation of the bank verification number (BVN) exercise in 2014 (Akyuz, Isaac and Tony, 2019) when it made it compulsory that all customers should go through the enrollment before they can carry out any transaction on their account.. The registration process was quite simple and straightforward as it was designed to encourage many individuals to partake in the exercise. Customers basically stroll into the banking hall and have their biometrics data captured, after which a unique identification is generated for the customer and then made available to all otherbanks for possible subsequent onboarding, simplifying access to other financial products (Izogo, Jayawardhena and Kalu, 2018).

The financial services sector in Nigeria can be broadly divided into two main segments namely formal and informal (Adelakun, 2009). The informal segment comprises of savings and loanssocieties, traditional money lenders and local cooperatives (Demirguc-Kunt, Klapper and Singer, 2017). These informal channels are dispersed amongst the population in the less-developed rural areas and more developed urban cities like Lagos, Port Harcourt and Abuja (Muritala and Fasanya, 2013). The handful of people that patronize these channels may include market men and women, traders, technicians, construction workers etc. This set of individuals are those who do not possess the documents required by the formal institutions to access financial services. On the flip side, the formal segment comprises of commercial and merchant banks, insurance companies, wealth and investment firms, stock broking firms, pension firms, microfinance and development banks, primary mortgage institutions etc. (Adekunle, Salami and Adedipe, 2013). The formal segment, unlike the informal segment is regulated by different government enterprises like Central Bank of Nigeria (CBN), the National Insurance Commission (NAICOM), the Nigerian Deposit insurance Corporation (NDIC), the National Pension Commission (NPC) and the Securities and Exchange Commission (SEC). Not surprisingly, most of the bodies and companies operating in both the formal and informal segments are based in Lagos, which is the commercial nerve Centre of the country.

The dominant player in the financial services sector is the banking sub-sector (Alley, 2022). In other words, most of the other players in the industry will lean one way or the other on the services provided by the banks. As such, most of the conclusions from this research will be drawn from the experiencesof practitioners and experts in this sub-sector. The next section is therefore dedicated to providing more details about this all-important sector.

3.2 The banking sub-sector in Nigeria

The Nigerian banking sub-sector is arguably the most essential component of the financial services sector as it plays an important role in the economic development of any country being a major provider of funds to stimulate business growth (Okonkwo et al., 2022). According to Unurhoro and Dennis Efemuaye (2022) , by the end of 2014, the banking sub-sector alone has 21 commercial banks, 64 licensed finance houses, 884 micro finance, rural and urban, agricultural development banks including bank of industry and 42 primary mortgage banks. There are also other sub-sectors like the non-Bank financial institutions (NBFI) which consists of insurance firms, discount houses, stock broking firms, pensions, bureau de change etc. playing significant roles but occupying a relatively smaller portion of the sector vis-à-vis the banks.(Okwuoma, 2020). However, irrespective of their sizes, they work in tandem with the banks to produce a strong financial system for a country.

Several studies (Gidigi, 2017; Ogunmuyiwa, Okuneye and Amaefule, 2017; Mohammed, 2019) have shown that the banking sub-sector is a chain of institutions working with diverse instruments, policies and processes to facilitate the flow of funds across different channels which invariably stimulates productivity in the economy. Globally, the banking sub-sector in any economy of the world performs a very essential function in the growth of that economy, which is why governments should encourage the developments of banks by recognizing and enhancing factors that will not be inimical to their growth (Mohammed, 2019). An efficient banking system will enhance the seamless exchange of goods and services amongst buyers and sellers and provide a platform that promote savings and investment (Akpunonu et al., 2019).

3.3 The functions of banks in Nigeria

According to Ekpenyong and Acha (2011), banking functions can be broadly categorized into two: primary and secondary functions. Primary functions include deposit collection and disbursement of loans. Secondary functions include facilitation of forex operations, issuance of letters of credit, funds transfer services, safe deposits of gold, securities and other precious possessions, issuance of credit reference, maintenance of customer information/records, and issuance of payment orders and overdraft.

Jeucken and Bouma (2017) stated that banking services include lending, savings, financial advice, investments, payments, warranties, and real estate transactions. The authors asserted that these services create two main streams of income for the banks, namely provision and interest gains. Banking functions are typically spread amongst different internal departments such as private banking, investment banking, trade finance, corporate banking, and customer service. Furthermore, banks carry out other supplementary functions like fiscal advisory, facilitating local and international payments, and conducting foreign exchange transactions.(Ofili Jude, 2019).

Banks expertly mop up excess funds from saving accounts and make them available to investors or borrowers that may want to use them to finance business ideas or opportunities that may eventually shore up the economy (DeYoung and Rice, 2004; Ekpenyong and Acha, 2011; Agbo, 2018). The activity described in the foregoing is known as financial intermediation where surplus funds are mopped up by the banks and made available and channeled to approved individuals and corporate bodies as loans (Nwoye, Banchev and Kenn-ndubuisi, 2012; Ongore and Kusa, 2013; Simon and

Marshal, 2017). Therefore, the depositors are creditors to the banks while the banks are creditors to the fund borrowers (Ogunmuyiwa, Okuneye and Amaefule, 2017). Igbinosa, Sunday and Babatunde (2017) added that the credit extended to these approved entities or customers could be short or long-term, depending onthe agreement on ground.

Essentially, banks make profits from the difference between the lending fees they collect from the borrowers and the meagre interest they may pay the depositors, feeding off the customers in addition to the myriads of charges they ask them to pay (DeYoung and Rice, 2004). Various arguments (Ololade and Ogbeide, 2017; Soetan, Mogaji and Nguyen, 2021) have been raised on the fairness of the diverse charges that banks in Nigeria impose on their customers. What's the justification for such charges? Couldn't the banks be contented with the interest made off disbursed loans, given that the bulk of such loans come from the customers? This action may deter some individuals from accessing financial services because they are scared that the banks may continually charge them unnecessary and excessive fees.

The functions of banks in Nigeria dates to 1882 when the first Bill of Exchange Act was enacted; the bill enumerates the functions of banks as lending, collecting deposits from customers, payments, and issuance and honoring of legitimate cheques (Ofili Jude, 2019). Toby and Peterside,(2014) argued that commercial and development banks in Nigeria play leading roles in financing themanufacturing and agricultural sectors albeit most of the allocated funds go to the latter with varyingdegrees of impact in the contributions of the two sectors to the nation's GDP. Banks play a prominentrole in the efficient functioning of the economy of a country especially with their roles in capital formulation (Nwoye, Banchev and Kenn-ndubuisi, 2012). The authors posited that the banks' role in capital formation invigorates growth in the economy.

Facilitating payments is perhaps the most important function of banks. Unfortunately, most of the payments in developing countries are still made by cash. Demirguc-Kunt, Klapper and Singer (2017) reported that in 2014 about 60 percent of adults in developing economies received salary payments in cash, 91 percent received payment for agricultural products in cash and almost half of government disbursements to individuals were done by cash. In the same vein, nine out of ten people made payment for utility services in cash. However, making payments through the banks have several advantages. Account holders can receive funds within a short time, saving them the pains of having to travel long distance to collect money from customers, associates, friends, or family. In addition, the risk of being attacked by hoodlums while carrying cash is alleviated (Okifo and Igbunu, 2015). Demirguc-Kunt, Klapper and Singer highlighted that receiving payments via bank accounts may discourage the collection of kickbacks and bribes, especially by corrupt government officials who are charged with disbursement of funds or social benefits to vulnerable citizens in rural areas.

Another important function carried out by banks is risk assessment (Njogo, 2012). Banks have put in place standard and efficient mechanisms for assessing and distributing risks before giving access to credit facilities. This will go a long way in reducing the likelihood of the customer defaulting in paying back their loans. Most times, the banks partner with credit referencing companies to profile the credit history of a potential beneficiary before granting them access to loans (Demirguc-Kunt, Klapper and Singer, 2017) Such credit history can be built over time when an individual consistently pays for utility and service bills especially through direct debit, which unfortunately may not be common in developing countries. Jeucken and Bouma (2017) argued that effective risk management by banks can be instrumental to the attainment of a sustainable society.

In a study conducted by (Nwoye, Banchev and Kenn-ndubuisi, 2012), they discovered that the total assets generatedby banks in the course of performing their functions have a considerably positive effect on Nigeria'seconomic development. Various authors (Olowofeso, Adeleke and Udoji, 2015; Okonkwo et al., 2022) have also corroborated this position by asserting that banking sector development should invigorate economic growth, which they described as the ability of an economy to generate increasingproducts and services over a particular period of time. In addition, (Unurhoro and Dennis Efemuaye, 2022)carried out a research based on economic activities in Nigeria between 1980 and 2008 to support the argument that improvement in financial services have a positive correlation on growth inthe economy. The authors believed that banks are valuable mechanisms in orchestrating economic growth considering their contribution to the overall productive capability of an economy.

Visible growth, however, seems not to be reflective in the lives of ordinary Nigerians who struggled daily to feed themselves and make ends meet. It is important that economic development should lead to tangible results like reduction of poverty levels in the country. Claessens (2006) argued that there is evidence that a well-functioning financial system enhances reduction in poverty and facilitates a more balanced distribution of income across the population. Why is that not the case in Nigeria? Could it be that the financial system majorly represented by the banks, is not robust enough to cause such a change? Incidentally, declining the poverty levels is one of the targets of sustainable development as seen in the UN sustainable development goals for the nations (Pedersen, 2018). Economic growth should translate to better lives for the ordinary citizens. If this is however not the case, the basis, or the indices of affirming growth in an economy where most of the people suffers should be questioned. What could be the missing factor here? Is it possible for an economy to grow without a corresponding growth in the livelihoods of people in that country? Could it be thereare other factors that may be responsible for the gains of the economic growth not reaching most of the population? Muritala and Fasanya (2013) identified bank charges and weak regulatory frameworks as some of the factors inhibiting access of a large segment of people to financial services in developing countries, thus limiting equitable distribution of resources.

4. THEORETICAL FRAMEWORK RELATING TO DIGITAL TRANSFORMATION

4.1 Theory of disruptive innovation

The theory of disruptive innovation was advocated by Christensen in 1997 and has generated a lot of debates from both the industry and academia (Yu and Hang, 2010; Christensen et al., 2017) . The central theme surrounding the theory is the unexpected dominance of disruptive technologies that offer divergent values from conventional technologies and are originally lower in "standard" than conventional technologies in terms of performance but suddenly become imperative to the conventional customers, thereby disrupting the market (Yu and Hang, 2010). According to Anshari, Almunawar and Masri (2020), digital technologies has orchestrated the emergence of several disruptive innovations in different sectors of the economy including the financial services sector where Fintech is significantly altering the business models of many of the entities in this sector with the resultant effect on the financial markets.

The disruptive innovation theory was inductively synthesized from the disk drive industry using a descriptive framework (Christensen et al., 2017). According to the authors, the theory consists of 3 main elements. Firstly, the speed of progress in the development of technology in many sectors is greater than the consumer's demand for higher performance technologies. Consequently, the conventional firm floods the market by producing more of these advanced products than what the customers need; thus, creating a gap at the lower end of the market between the performance required by the consumers as against that offered by the conventional firm, thereby creating an opening at the lower end of the market as illustrated in figure 2. For example, in the financial services sector, banks typically continue to evolve and provide services to their customers on a trajectory of efficient and faster services within the banking wall, which is historically valued by customers, and left a place at the bottom of the market where Fintech providers can meet the performance demanded by the customers rather than that provided by the banks.

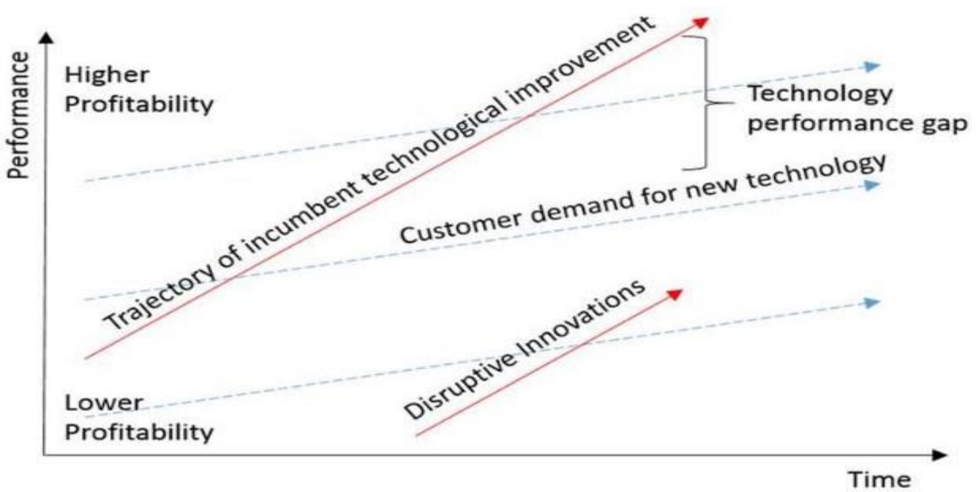

Figure 2: *Disruptive innovation model* ***Source***: (Christensen et al., 2017)

Secondly, there are two categories of innovation. Most of the innovations in businesses are sustaining innovations where improvement in services and products may result in higher performance which consumers typically value based on historical trends. We can term this as digitalization. The other type of innovations which do rarely occur are disruptive innovations which can be seen as digital transformation. At the onset, disruptive technologies maybe unattractive to the customers based on service performance but when such services are packaged with other attributes desirable to the consumer, they become appealing especially to the lower end of the market. An example of such innovation is Fintech that is currently disrupting the financial services sector because apart from affordability, financial services are easier and more convenient to access than in the traditional banks or insurance companies.

In the third element, current customers may restrain conventional firms from pursuing innovations because the innovation does not appeal to them at the time, but such innovation may be attractive to the upcoming firm who may have little or no customers patronizing them at the time. As a result, the conventional firms are unperturbed in developing seemingly mediocre and low-margin products or services that target low end mass market because their existing affluent customers are not interested. However, before the conventional firm realize its mistakes, the upcoming firm has taken over a substantial part of that market segment with some of their current customers even patronizing the upcoming firm. When this happens, disruption has occurred. Interestingly, the scenario described above is similar to what is happening in the financial services sector where Fintech firms are disrupting conventional players like banks and insurance companies.

4.2 Digital transformation model for public sector administration

The digital transformation framework for public sector administration in Europe was proposed by (Mergel, Edelmann and Haug, 2019). Before arriving at their conclusions, the authors conducted 40interviews with professionals across different levels of government in 9 European countries who areinvolved in digital transformation projects in their respective enterprises. In developing the framework, they were guided by the following 4 questions:

I. What are the reasons for public administrations to digitally transform public servicedelivery?
II. What are public administrations digitally transforming?
III. How are public administrations digitally transforming their public service delivery?
IV. To what end are administrations transforming?

Most of the professionals interviewed by the researchers agreed that public administration can be transformed digitally by new technologies with the resultant effect being process improvement, relationships with citizens, and enhancement of service provisioning amongst other outcomes as shown below in figure 3.

	Mentioned in percentage
Output	
New services	6.5%
New products	1.1%
New processes	2.2%
New skills	0%
Outcome	
Improved services	19.6%
Improved processes	8.7%
Better relationships	4.3%
Policies	1.1%
Digital environment	6,3%
Impact	
Value creation	9.8%
Organizational change	27.2%
Digital society	8.7%
Democratic principles	10.9%

Figure 3: *Resultant Effect of Digital Transformation in the Public Sector* **Source:** (Mergel, Edelmann and Haug, 2019)

Figure 4 shows a diagrammatic representation of the main components of the framework which are the reasons for transformation, objects that are being transformed, process of transformation and the value derived from the transformation. Reasons for transformation could either be due to internal or external pressure. Objects that are digitally transformed include artifacts, processes, bureaucratic culture, and the organization itself. Processes of transformation are digitalization, relationships, competencies, and mindset. Transformation value could either be short-term or long-term dependingon how profound the impact is.

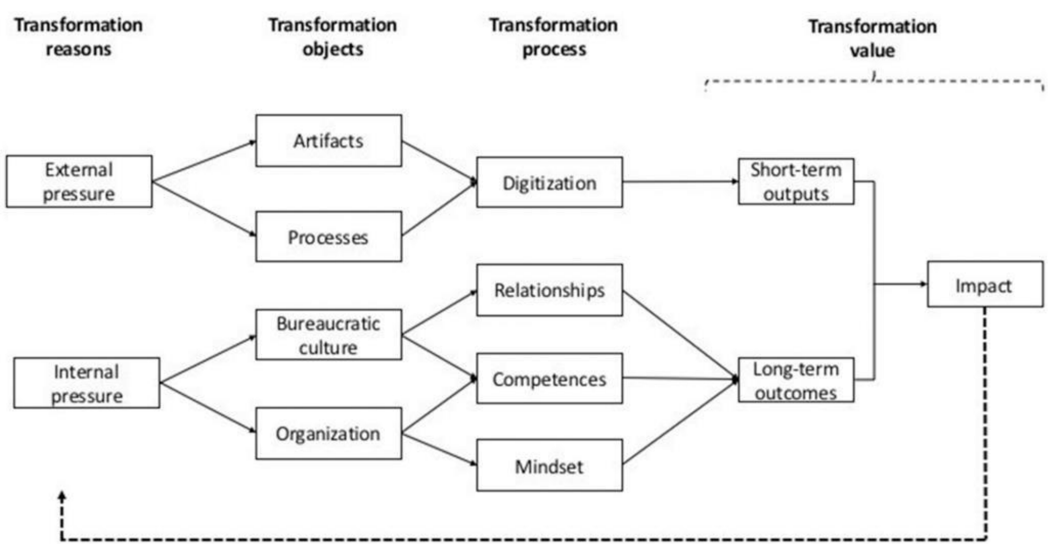

Figure 4: *Digital Transformation Framework of Public Sector Administration in Europe :* **Source** (Mergel, Edelmann and Haug, 2019)

The framework seems to be robust however it is silent on how to determine the maturity level of an enterprise in its digital journey. Besides, it does not explain what enables or facilitates digital transformation in an organization or a particular segment of the economy. Furthermore, the framework is highly contextual as it indicated a European perspective of digital transformation limited to public administration in only 9 countries out of the 28 member nations of the EU, representing merely 32%. Even at that, some of the 9 countries were underrepresented in their population which may indicate some level of bias in their findings.

5. RESEARCH APROACH

In examining the research phenomena, an exploratory study will be conducted. Exploratory studies are useful in investigating the exact nature of a phenomenon especially when little or nothing is known about the phenomenon (Saunders, Lewis and Thornhill, 2009). Research sub-questions will be constructed in an open-minded manner to foster an unprejudiced environment to comprehend how practitioners in the financial services sector describe their understanding and approaches to digital transformation beyond the walls of their organizations in the context of the larger society. Therefore, the interpretivism paradigm will be adopted to understand their views, perspectives, approaches, and activities around digital transformation. Rehman and Alharthi (2016) quipped that interpretivists believe in socially constructed multiple realities, which means reality is created and not discovered like the notion of the positivist. It is not feasible to literally discern reality because it is constantly being arbitrated by our senses; interpretive epistemology is therefore subjective (Tubey et al., 2015). Given the entomological nature of this research, a qualitative method will be appropriate because of the subjective meanings that will be extracted from the participants' viewpoints (Marvasti, 2018).

Interviews, focus groups and surveys are methods used to collect data about people and their views, experiences, perceptions, and conduct (Mauthner, 2020). However, unstructured and semi-structured interviews will be used in this study to collect data. The participants will be drawn from a cross-section of Chief Information Officers (CIO), Chief Digital Officers (CDO), and other managers/executives that have oversight of the digital transformation initiatives in banks and insurance companies in Nigeria. The rationale behind the choice of these participants is that they make major decisions that affect the deployment of digital transformation in their various organizations. Besides, they are involved in setting the strategic direction for DT initiatives that hinge on the use of Fintech in their enterprises. In addition, as executives, it is assumed that they should be conversant with emerging issues relating to sustainable development in Nigeria, and as such may be able to elucidate the implications of DT in the financial services sector in this regard. The data collected from the interviews will be analyzed using the NVivo tool to identify the different themes captured in the interviews. Meanings and insights will then be derived from these themes to make conclusions using grounded theory.

Grounded theory is an approach to research where theory is built and grounded in the data collected from the participants, conscious of theoretical sensitivity to previous theories in the same field (Creswell and Poth, 2012). Based on the results generated from the processed data, a theoretical framework will be built to illustrate how digital transformation is operationalized in the financial services sector in Nigeria.

5.1 Ethical Considerations

For this research, arrangements will be made to obtain clearance from De Montfort University Ethics Committee before data collection commences. The consent of the participants will be solicited before the commencement of the interviews where data is expected to be collected. Besides, the intent and purpose of the research will be communicated in an email to the participants to enable them to decide whether to participate in the interviews or not.

6. EXPECTED THEORETICAL AND PRACTICAL CONTRIBUTIONS

Several studies on digital transformation have endeavored to define the term and generalize it across industries. An example of such a study was carried out by (van Veldhoven and Vanthienen, 2020) who identified 17 different definitions from literature and attempted to unify them by extracting the core elements of the definitions and bringing them together under one umbrella. Jedynak et al (2021) bemoans the lack of focused literature on digital transformation on specific sectors and entities in the society. Mergel, Edelmann and Haug (2019) address an aspect of this concern when they studied digital transformations in the public sector using e-government technologies as a focal point of impact. The authors came up with five propositions and developed a theoretical framework for digital transformation in the public sector. Their study was however limited to the public sector in 9 European countries.

There is a dearth of literature on the definition and nature of digital transformation happening in the financial services sector because of the Fintech innovation. This study will endeavor to fill this void in knowledge by providing a rich and in-depth meaning of digital transformation as understood by the practitioners, experts, and other stakeholders in the financial services industry. Insights will be drawn from the findings to assess the impact on sustainable development in Nigeria.

REFERENCES

ABDULQUADRI, A. et al. (2021) Digital transformation in financial services provision: a Nigerian perspective to the adoption of chatbot. *Journal of Enterprising Communities*, 15(2), pp. 258–281.

ADEJUMO, A.V. and ADEJUMO, O.O. (2014) Prospects for Achieving Sustainable Development Through the Millennium Development Goals in Nigeria. *European Journal of Sustainable Development*, 3(1), pp. 33–46.

ADEKUNLE, O., SALAMI, G. and ADEDIPE, O. (2013) Impact of Financial Sector Development on the Nigerian Economic Growth. *American Journal of Business and Management*, 2(4), pp. 347–356.

ADELAKUN (2009) Financial Sector Development and Economic Growth in Nigeria (1) 1990-2009. 1(1), pp. 25–41.

AGBELUSI, M.O. (2018) Fintech as a tool for promoting financial inclusion and economic development in Nigeria. 42(1), pp. 61–68.

AGBO, E.I. (2018) Effect of Financial Sector Development on Economic Growth : A Case of Nigeria. 9(20), pp. 80–91.

AKPUNONU, U. et al. (2019) Effect of Financial Sector Reforms on Economic Growth in Nigeria. *SSRN Electronic Journal*, pp. 1–12.

AKYUZ, M., ISAAC, O.M. and TONY, L. (2019) IMPACT OF BANK VERIFICATION NUMBER (BVN) ON CORRUPT BUSINESS PRACTICES IN UNITED BANK FOR AFRICA IN ABUJA. *International Journal of Management Studies and Social Science Research*, 1(6), pp. 39–52.

ALLEY, I. (2022) BOFIA 2020 and financial system stability in Nigeria: Implications for stakeholders in the African largest economy. *Journal of Banking Regulation*, (0123456789), [Online]

Available from: doi.org/10.1057/s41261-022-00192-6.

ALY, H. (2020) Digital transformation, development and productivity in developing countries: is artificial intelligence a curse or a blessing? *Review of Economics and Political Science*, ahead-of-p(ahead-of-print), [Online] Available from: doi.org/10.1108/reps-11-2019-0145.

ANSHARI, M., ALMUNAWAR, M.N. and MASRI, M. (2020) Financial technology and disruptive innovation in business: Concept and application. *International Journal of Asian Business and Information Management*, 11(4), pp. 29–43.

BAJPAI, N. and BIBERMAN, J. (2021) Digital Transformation and the 2030 Sustainable Development Agenda. (January), pp. 1–26.

BAYERO, M.A. (2015) Effects of Cashless Economy Policy on Financial Inclusion in Nigeria: An Exploratory Study. *Procedia - Social and Behavioral Sciences*, 172, pp. 49–56.

BREIDBACH, C.F., KEATING, B.W. and LIM, C. (2020) Fintech: research directions to explore the digital transformation of financial service systems. *Journal of Service Theory and Practice*, 30(1), pp. 79–102.

BROBY, D. (2019) Strategic Fintech. *Journal centre for financial regulation and innovation*, pp. 1–13.

CHRISTENSEN, C. et al. (2017) *Disruptive Innovation: Intellectual History and Future Paths*.

CLAESSENS, S. (2006) Access to financial services: A review of the issues and public policy objectives. *World Bank Research Observer*, 21(2), pp. 207–240.

CRESWELL, J. and POTH, C. (2012) *Second Edition QUALITATIVE INQUIRY& RESEARCH DESIGN Choosing Among Five Approaches*.

CZARNECKA, B. and MOGAJI, E. (2020) How are we tempted into debt? Emotional appeals in loan advertisements in UK newspapers. *International Journal of Bank Marketing*, 38(3), pp. 756–776.

DAVID-WEST, O. (2016) The path to digital financial inclusion in Nigeria: Experiences of Firstmonie. *Journal of Payments Strategy & Systems*, 9(4), pp. 256–273.

DEMIRGUC-KUNT, A. et al. (2018) *The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution*.

DEMIRGUC-KUNT, A., KLAPPER, L. and SINGER, D. (2017) Financial Inclusion and Inclusive Growth: A Review of Recent Empirical Evidence. *Financial Inclusion and Inclusive Growth: A Review* *of Recent Empirical Evidence*, (April), [Online] Available from: doi.org/10.1596/1813-9450-8040.

DEMIRKOL, S. et al. (2011) Development of an agent based E-barter system. *INISTA 2011 - 2011 International Symposium on INnovations in Intelligent SysTems and Applications*, pp. 193–198.

DEYOUNG, R. and RICE, T. (2004) Non-Interest Income and Financial Performance at Commercial Banks in the Caribbean. *The Financial Review*, 2003(January), pp. 101–127.

EBERT, C. and DUARTE, C.H.C. (2018) Software Technology - Digital Transformation. *IEEE Software*, 35(4), pp. 16–21.

EKPENYONG, D. and ACHA, I. (2011) Banks and economic growth in Nigeria. *European Journal of Business and Management*, 3(4), pp. 92–95.

ELMASSAH, S. and MOHIELDIN, M. (2020) Digital transformation and localizing the Sustainable Development Goals (SDGs). *Ecological Economics*, 169(September 2019), p. 106490.

GIDIGI, M. (2017) An assessment of the impact of banking reforms on economic growth and bank performance in Nigeria. *CBN Journal of Applied Statistics*, 8(2), p. pp.143-162.

GOERZIG, D. and BAUERNHANSL, T. (2018) Enterprise Architectures for the Digital Transformation in Small and Medium-sized Enterprises. *Procedia CIRP*, 67, pp. 540–545.

IGBINOSA, S., SUNDAY, O. and BABATUNDE, A. (2017) Empirical Assessment on Financial Regulations and Banking Sector Performance. *Journal of Central Banking Theory and Practice*, 6(3), pp. 143–155.

IMRAN, F. et al. (2021) Digital Transformation of Industrial Organizations: Toward an Integrated Framework. *Journal of Change Management*, 21(4), pp. 451–479.

IZOGO, E.E., JAYAWARDHENA, C. and KALU, A.O.U. (2018) Examining customers' experience with the Nigerian Bank Verification Number (BVN) policy from the perspective of a dual-lens theory. *International Journal of Emerging Markets Examining*, 13(4), pp. 1–31.

JEDYNAK, M. et al. (2021) Digital transformation of organizations: what do we know and where to go next? *Journal of Organizational Change Management*, 34(3), pp. 629–652.

JEUCKEN, M. and BOUMA, J.J. (2017) The changing environment of banks. *Sustainable Banking: The Greening of Finance*, pp. 24–38.

JONES, P., HILLIER, D. and COMFORT, D. (2016) The Sustainable Development Goals and the Financial Services Industry. *Athens Journal of Business & Economics*, 3(1), pp. 37–50.

KOFFI, H.W.S. (2016) The Fintech Revolution: An Opportunity for the West African Financial Sector. *Open Journal of Applied Sciences*, 06(11), pp. 771–782.

KOLA-OYENEYIN, T., KUYORO, M. and OLANREWAJU, T. (2020a) Fintech in Nigeria . *McKinsey & Company*, [Online] Available from: https://www.mckinsey.com/featured-insights/middle-east-and-africa/harnessing-nigerias-fintech-potential#.

KOLA-OYENEYIN, T., KUYORO, M. and OLANREWAJU, T. (2020b) Harnessing Nigeria's fintech potential. *McKinsey & Company*, (September), p. 4.

LELE, S.M. (1991) Texto 1.Pdf. *Democratização da administração pública e o princípio da participação administrativa*, 19(6), pp. 607–621.

MARVASTI, A. (2018) Research methods. *The Cambridge Handbook of Social Problems*, 1(3), pp. 23–37.

MAUTHNER, N.S. (2020) Research philosophies and why they matter. *How to Keep your Doctorate on Track*, pp. 76–86.

MERGEL, I., EDELMANN, N. and HAUG, N. (2019) Defining digital transformation: Results from expert interviews. *Government Information Quarterly*, 36(4), p. 101385.

MOHAMMED, A. (2019) Effect of Financial Sector on Economic Growth : Evidence From Deposit Money Banks in Nigeria. 4(1).

MORAKANYANE, R., GRACE, A. and O'REILLY, P. (2017) Conceptualizing digital transformation in business organizations: A systematic review of literature. *30th Bled eConference: Digital Transformation - From Connecting Things to Transforming our Lives, BLED 2017*, pp. 427–444.

MURITALA, T.A. and FASANYA, I.O. (2013) Relationship between Sustainable Financial Services and Poverty Reduction in Nigeria - Evidence from Error Correction Model. *International Letters of Social and Humanistic Sciences*, 2, pp. 39–50.

NDEMO, B. and WEISS, T. (2017) Making Sense of Africa's Emerging Digital Transformation and its Many Futures. *Africa Journal of Management*, 3(3–4), pp. 328–347.

NJOGO, B.O. (2012) Risk management in the Nigerian banking industry. *Kuwait Chapter of Arabian*

Journal of Business and Management Review, 10(10), pp. 100–109.

NWOYE, C., BANCHEV, A. and KENN-NDUBUISI, J. (2012) The Role of Banks in Capital Formation and Economic Growth : The Case of Nigeria. *Economy Transdisciplinarity Cognition*, 15(1), pp. 103–111.

OFILI JUDE, I. (2019) Do Banking Sector Reforms Drive Economic Growth in Nigeria. *International Journal of Business and Economics Research*, 8(5), p. 273.

OGUNMUYIWA, M.S., OKUNEYE, B.A. and AMAEFULE, J.N. (2017) EuroEconomica Bank Credit and Growth of the Manufacturing Sector Nexus in Nigeria : An ARDL Approach EuroEconomica. *Euroeconomica*, 2(36).

OKIFO, J. and IGBUNU, R. (2015) Electronic Payment System in Nigeria: Its Economic Benefits and Challenges. *Journal of Education and Practice*, 6(16), pp. 56–63.

OKONKWO, J. et al. (2022) THE CONTRIBUTION OF BANKING SECTOR TO THE GROWTH OF THE NIGERIAN ECONOMY. *International Journal of Research*, 9(03), pp. 85–101.

OKWUOMA, O. (2020) Impact of {Financial} {Sector} {Reforms} on the {Performance} of the {Nigerian} {Economy}. 1(1), p. 13.

OLAYINKA , OLAKUNLE AND WYNN, M.G.O. (2021) Olayinka , Olakunle and Wynn , Martin G ORCID : 0000-0001- 7619-6079 (2021) Digital Transformation in the Nigerian Small Business Sector . In : Handbook of Research on Digital Transformation , Industry Use Cases , and the Impact of Disruptive Technologi. 6079, pp. 0–1.

OLOLADE, B. and OGBEIDE, S. (2017) E-Banking in Nigeria : Issues and Challenges. *Research Journal of Finance and Accounting*, 8(6), pp. 16–24.

OLOWOFESO, E., ADELEKE, A. and UDOJI, A. (2015) Impact of private sector credit on economic growth in Nigeria. *CBN Journal of Applied Statistics*, 06(2), pp. 81–101.

ONGORE, V.O. and KUSA, G.B. (2013) Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues*, 3(1), pp. 237–252.

ORJI, A. et al. (2018) Electronic Banking Innovations and Selected Banks Performance in Nigeria. *The Economics and Finance Letters*, 5(2), pp. 46–57.

PALMIÉ, M. et al. (2020) The evolution of the financial technology ecosystem: An introduction and agenda for future research on disruptive innovations in ecosystems. *Technological Forecasting and Social Change*, 151, [Online] Available from: doi.org/10.1016/j.techfore.2019.119779.

PARVIAINEN, P. et al. (2017) Tackling the digitalization challenge: How to benefit from digitalization in practice. *International Journal of Information Systems and Project Management*, 5(1), pp. 63–77.

PEDERSEN, C.S. (2018) The un Sustainable Development Goals (SDGs) are a Great Gift to Business! *Procedia CIRP*, 69(May), pp. 21–24.

REHMAN, A.A. and ALHARTHI, K. (2016) An introduction to research paradigms. International. *Journal of Educational Investigations*, 3(8), pp. 51–59.

REIS, J. et al. (2018) Digital transformation: A literature review and guidelines for future research. *Advances in Intelligent Systems and Computing*, 745(March), pp. 411–421.

SAUNDERS, M., LEWIS, P. and THORNHILL, A. (2009) *Reserach methods for business students, Fithh edition,Prentice Hall*.

SIDDIK, M.N.A., AHSAN, T. and KABIRAJ, S. (2019) Does Financial Permeation Promote Economic Growth? Some Econometric Evidence From Asian Countries. *SAGE Open*, 9(3), [Online] Available from: doi.org/10.1177/2158244019865811.

SIMON, E.M. and MARSHAL, I. (2017) Financial Intermediation Functions of Microfinance Banks in Nigeria: A Vector Autoregressive and Multivariate Approach. *International Journal of Economics and Financial Modelling*, 2(1), pp. 7–24.

SOETAN, T.O., MOGAJI, E. and NGUYEN, N.P. (2021) Financial services experience and consumption in Nigeria. *Journal of Services Marketing*, 35(7), pp. 947–961.

STOLTERMAN, E. and FORS, A.K. (2004) Information Technology and the Good Life, Information Systems Research: Relevant Theory and Informed Practice. *Information Systems Research. IFIP International Federation for Information Processing*, pp. 687–692.

TOBY, A. and PETERSIDE, D. (2014) Analysis of the role of banks in financing the agriculture and manufacturing sectors in Nigeria. *International Journal of Research in Business Management (IJRBM)*, 2(2), pp. 9–22.

TUBEY, R.J. et al. (2015) Research paradigms: Theory and practice. *Research on Humanities and Social Sciences*, 5(5), pp. 2225–0484.

UNURHORO, J. and DENNIS EFEMUAYE, B. (2022) Influence of Banking Sector Reforms on the Capital Market. *International Journal of Research Publication and Reviews Journal homepage: www.ijrpr.com*, 3(2), pp. 280–285.

VAN VELDHOVEN, Z. and VANTHIENEN, J. (2020) Designing a comprehensive understanding of digital transformation and its impact. *32nd Bled eConference Humanizing Technology for a Sustainable Society, BLED 2019 - Conference Proceedings*, (March 2022), pp. 745–763.

VIAL, G. (2019) Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems*, 28(2), pp. 118–144.

YU, D. and HANG, C.C. (2010) A Reflective Review of Disruptive Innovation Theory. *International Journal of Management Reviews*, 12(4), pp. 435–452.

ZAVOLOKINA, L., DOLATA, M. and SCHWABE, G. (2016) The FinTech phenomenon: antecedents of financial innovation perceived by the popular press. *Financial Innovation*, 2(1), [Online] Available from: doi.org/10.1186/s40854-016-0036-7.