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The Role of Fintech and Digital Financial Services in Enhancing Financial Inclusion and Financial Stability in Nigeria

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Abstract

Digitalization has brought about major changes in the banking sector. Fintech has recently attracted a lot of attention and popularity, revolutionizing the financial industry by offering consumers and businesses more accessible and efficient services. The essence of this study is to look into the new phenomenon in the financial system called FINTECH and financial intermediary activities towards financial inclusion and financial development in Nigeria. This study is based on descriptive design using content analysis to review past and current literature to achieve its objectives. Based on the review carried out, the conclusion is drawn that FINTECH is an important financial institution in Nigeria and economies worldwide, impacting almost every economic area. The fact that it benefits both urban and rural residents and is helpful in providing services for both the wealthy and the impoverished is equally significant. Put differently, it's a financial technology that caters to everyone and everything. If there are no strict rules and few technological advancements, FINTECH can benefit everyone. It was recommended that to encourage better adoption, digital products should be made to better meet the unique characteristics of the financially excluded (such as language, type of mobile device owned, and degree of digital technology expertise).

Keywords: Digital financial services, Financial inclusion, Fintech.

1. Introduction

Digitalization has brought about major changes in the banking sector. Increased connectivity, quicker information processing, and a change to new business structures for financial service providers are some examples of this (Lessambo 2023). Fintech has recently attracted a lot of attention and popularity, revolutionizing the financial industry by offering consumers and businesses more accessible and efficient services. The Fintech sector is expanding quickly and includes a wide range of applications, including online banking, payment processing, investment management, crowdfunding, and blockchain technology, among others (Arner et al. 2015). Increased financial access, efficiency, and convenience have resulted from this merging of technology and finance, which has profoundly altered service delivery, payment processing, investment options, and risk management. Fintech has drastically changed how individuals access and manage financial services worldwide since its founding in 2000. People can easily manage their funds from any location with mobile banking and digital wallets, guaranteeing quicker, safer, and more convenient payments (Kost 2023).

Fintech has been widely adopted as a disruptive innovation that has revolutionized the financial services industry on a global scale. The number of Fintech startups worldwide tripled from over 12,200 in 2019 to over 30,000 in 2022, and the investments in Fintech companies reached over USD 200 billion in 2025(KPMG 2022). Financial technology (Fintech) has influenced business by helping create better services for consumers and businesses (Vijayagopal et al., 2024).

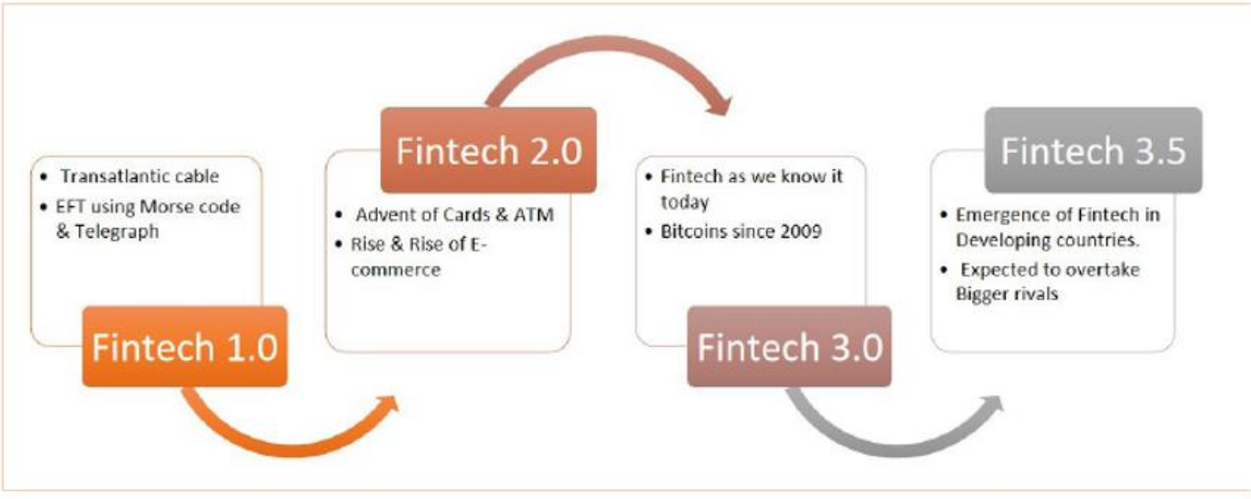
Fintech-driven companies now have a potential to rival traditional financial services sectors, facilities, as well as intermediaries on a level of competitiveness. The widespread use of modern technology provides advantages as well as drawbacks (Zeidy, 2022). Fintech has the ability to improve the efficiency of the financial system, offer better, more targeted products and services, and expand financial inclusion in developing countries. However, it could also be dangerous if its application undermines competitiveness, monetary policy transmission, financial security, or dependability. The essence of this study is to look into the new phenomenon in the financial system called FINTECH and financial intermediary activities towards financial inclusion and financial development in Nigeria. This study is based on descriptive design using content analysis to review past and current literature to achieve its objectives upon which conclusion will be drawn.

1.1. The Concept of FINTECH and Its Development

Zaidy (2022) defines "financial technology," or "Fintech," as a word used to describe new technologies that are intended to improve and automate the supply and use of financial services. In its most basic form, fintech uses advanced software and algorithms on PCs and smartphones to help businesses, entrepreneurs, and individuals manage their finances more effectively. This helps them better manage their finances and their lifestyles (Hu et al., 2024). Global Findex statistics estimates that in 2023, 62% of adults globally would either have an account with a traditional bank or have access to digital money services (World Bank, 2024). Academics, legislators, and other stakeholders have begun to acknowledge the concept of fintech-based financial inclusion (FBFI), sometimes referred to as electronic financial inclusion, due to its potential to enhance shared prosperity. A number of development agencies have also made significant efforts to promote FBFI, given its critical role in the development and state of the economies of emerging markets. FINTECH is regarded as a branch of information and communication technology (ICT) advancement. Electronic technology utilized for information storage and retrieval is known as information and communication technology, or ICT (Isa-Olatinwo et al., 2022). These days, the corporate world is changing at an accelerating pace. The reasons for this are attributed to globalization, significant funding on information technology (IT), the rapid evolution of technology, and growing R&D costs (Al-nadesh et al., 2022).

Nigeria is a leading African fintech hub, accounting for 28% of the continent's fintech companies (Agboola, 2019). Top companies driving digital payments, banking, and lending include OPay, PalmPay, Moniepoint (formerly TeamApt), Flutterwave, Paystack, and Kuda Bank. These platforms offer solutions from digital wallets to payment processing, targeting financial inclusion. Many Nigerian fintechs are regulated by the Central Bank of Nigeria (CBN) and are increasingly merging services—such as payments, credit, and banking—into full-stack financial platforms. Fintech companies are transforming Nigeria's financial landscape by providing affordable, accessible, and digital-first services to underserved populations, boosting formal inclusion from 64% in 2023. Companies like OPay, Flutterwave, Paga, and Moniepoint have revolutionized mobile money, payments, and credit, reducing reliance on traditional bank branches and bridging the gap for rural and lower-income demographics (Ezinwa &Bello 2025).

In an effort to boost the market share and satisfy consumers while lowering costs, waiting times, and risk, financial companies are progressively pursuing service efficiency through a variety of technologies. Financial institutions all around the world have adopted ICT at a rapid rate throughout the past 20 years (Olori & Waribugo, 2016). Megabytes or tetrabytes of information may now be communicated more quickly, cheaply, and digitally thanks to advancements in ICT. Over time, money has reduced to simply knowledge. Notes of exchange are transformed into data and sent via satellite transponders and phone lines. With the help of ICT, new financial service companies are currently emerging to offer financial services to people who are either utterly ignored by banks or have trouble accessing banking and other financial services via mobile apps and other means of delivery of services (Zeidy, 2022).



Figuer 1. Revolution of Fintech Industry.

Source: Zeidy (2022).

The financial industry's ability to supply services, and also the availability and accessibility of financial services for individuals, who are normally excluded, have been greatly enhanced by the technological advances of the Fourth Industrial Revolution (Mpofu, 2024). AI is one example of an industry 4.0 technology that has been used to automate some operations. In the financial services sector, automation has assisted in lowering operational and transaction costs, which has led to lower service provision and access prices (Mpofu, 2023).

2. Theoretical Review

Since Everett Rogers' groundbreaking "*The Innovation Diffusion Theory*" was published in 1962, a number of theories on technology and financial services have emerged. The goal of Rogers (1962) is to clarify the how, why, and speed at which new ideas and technological developments spread throughout businesses and society. Rogers claims that the diffusion process is the means by which technical innovation proliferates across time. According to Shy (1997), diffusion theory proposes that innovations have five characteristics that affect their diffusion: Two essential elements of a technology are its relative advantage (the extent to which it outperforms state-of-the-art tools), compatibility (the extent to which it adheres to user behaviors and social norms), complexity (the extent to which it is easy to use or acquire), trialability (the opportunity to test a new idea before deciding to implement it),

and observability (the extent to which the benefits and outputs of the technology are obvious), are two essential elements of creativity. Research on diffusion has demonstrated that innovations with a combination of favorable characteristics—benefits, compatibility with existing practices and beliefs, low complexity, trialability, and observability—spread faster and more broadly than those with a number of negative characteristics. Put another way, integrating technology into organizational operations can enable staff members to perform more creative tasks, complete tasks more quickly, and deliver high-quality services. The philosophy of innovation states that innovation involves doing things differently, such as using FINTECH to offer consumers credit and financing options.

Another theory is *Theory of Reasoned Action* which was developed by Martin Fisbein and Icek Ajzen in 1967. The Theory of Reasoned Action (TRA) defines the connections between attitudes, norms, intentions, and behavior. According to the theory, an individual's intention to engage in an organizational activity—like adopting or rejecting technology—determines whether the behavior will occur. The subjective norm, which is the organization's conviction that the majority of companies or clients that have substantial influence over it should or shouldn't engage in the activity in issue, as well as the mindset of the bank management both impact this purpose (Zozak, 2005). According to TRA, a person's attitude toward an activity is shaped by their beliefs about the implications of their actions and their affective assessment of those results. Zozak (2005) defined belief as the organizationally subjective probability that engaging in a particular behavior would result in a particular outcome. Being "an implicit evaluative" of the result, affective evaluation allows the attitude construct in TRA to be broad and independent of any specific set of beliefs. Put differently, the only thing that can influence the performance of FINTECH companies is the availability of the technology that they provide. It means that if management's attitude toward the usage of FINTECH stays outdated or careless, financial institutions can still utilize typewriters instead of computers and more files rather than storing information on the cloud. Without a doubt, this will have an impact on how well they execute in terms of customer service, reach, and financial offerings.

Theory of planned operational control was propounded by Model in 1996. Model (1996) asserts that the Theory of Planned Operational Control (TPOC) maintains that operations are influenced by intentions, which also directly determine beliefs, personal standards, and perceived control of operations. Put another way, FINTECH's deliberate behavior of implementing technology lowers operating costs by enhancing service delivery. Additionally, it suggests that businesses offering FINTECH will make technological investments in order to minimize operating costs, enhance customer service, increase returns, maintain connections with other financial institutions both locally and globally, and optimize shareholder wealth.

2.1. The Importance of FINTECH

Major advances in ICT have spurred the expansion of digital transformation, fintech (financial technology), and financial inclusion. According to Elwkeel and Esawe (2020), the digital realm is changing progressively over time. creating novel forms of behavior. Moreover, El-Tohamy and Salem (2023) note that Fintech, or financial technology, is growing quickly in both developed and developing nations. The financial technology revolution is being driven by fintech, which can promote equitable finance, economic growth, and decreased inequality (Chinoda & Kapingura, 2024). It talks about creative financial solutions that technology makes available, such as new goods, services, or business models, to problems like high transaction costs and restricted banking accessibility. According to studies, the fact that different digital technologies make cashless payments possible makes them important for economies. The COVID-19 pandemic is starting to make more sense now that it has been linked to the digital revolution and payments (Huterska et al., 2021). A global epidemic has rendered contactless payment indispensable, resulting in a notable surge in the adoption of digital payment methods. One of the tools that has been used is the mobile wallet. Thanks to mobile payment methods, a multipurpose network currently provides convenient, user-friendly services (Soni & Mangona, 2024). The rise of fintech has brought about some notable developments in the financial industry. The rise of online lending and shadow banking is one important effect, which has led to a discernible decline in the lending operations and profitability of traditional banks (Li et al., 2022). The fierce rivalry posed by fintech companies' forces established banks to rethink their lending approaches. Aware that fintech companies with greater agility are gaining market share, banks are shifting their focus to areas in which they can maintain a greater market share (Thakor, 2020). This frequently results in a concentration of lending in lucrative but proprietary industries, which could raise the risk profiles of banks (Agyemang-Badu et al., 2018).

Current views suggest that fintech affects commercial bank risks in two ways (Chinoda & Kapingura, 2024). In terms of demand deposits, payments services, financial institutions are under pressure from the fintech industry's explosive growth (Wang et al., 2021). Commercial banks may borrow more money from other banks to cover their funding needs, which would raise their exposure to risk (Zhong & Jiang, 2021). However, there are also benefits to fintech applications. Banking institutions can lower their risk exposure by using cutting-edge technologies to improve operational efficiency, lower operating costs, and analyze data more effectively (Asongu & Salahodjaev, 2022).

2.2. FINTECH and Financial Inclusion

For a variety of protective (reducing risk exposure, including health-related issues) and productive (building assets, working capital) purposes, people in rural areas require access to financial services. These include buying stock, equipment, and agricultural inputs; maintaining infrastructure (Li, 2024); hiring labor for planting and harvesting (Girma & Huseynov, 2024); transporting goods to markets; making and receiving payments; managing seasonal earnings for covering expenses in the off season; investing in education, housing, and good health; and handling emergencies (Amnas et al., 2020). Formal financial institutions, such as commercial banks and rural or agricultural development banks, have historically shied away from providing long-term services in rural regions or have been unable to do so. Because of this isolation, which prevents rural populations from realizing their full potential, FINTECH has led to several advances in rural areas, creating new avenues for the provision of financial services. Research that is currently available demonstrates that several microfinance institutions (MFIs) have

expanded their rural operations since the advent of FINTECH (e.g., ACLEDA Bank in Cambodia and LAPO in Nigeria) (Sharma & Zhang, 2012; Zaman & Sakib, 2023). Although microfinance has made it easier for low-income rural households to obtain capital, it still faces difficulties in offering financial services to small farmers.

Digital financial services carried out by fintech companies such as Opay, Palm Pay, Moneypoint, Kuda etc, use reduces poverty and encourages equitable growth strategies, both of which have implications for long-term economic growth, according to a number of studies (Muthiora, 2015; Zulfiqar et al., 2016). The use of digital financial services has increased dramatically in an effort to close the gap in financial inclusion between the underbanked and unbanked populations (Nkechika, 2022). Because of this, the population of countries that are financially excluded nonetheless has a high demand for financial services. Given that the use of mobile phones and the internet now outpaces the penetration of banks, it is anticipated that these and other gadgets will serve as technological catalysts to improve financial inclusion (Nartey & David-West, 2015). This awareness is demonstrated by recent shifts in the ecosystem of electronic-based financial services and the manner in which telecommunications companies provide banking, settlement, and customer support solutions (Nkechika, 2022).

The emergence of fintech has not only enhanced financial inclusivity but also reinforced the partnerships and reliance among banks and also fintech companies (Shim and Shin, 2016). Risk-taking and competition are affected by this (Mocetti et al., 2017). Fintech has the ability to increase bank risk management standards, decrease the cost of information retrieval, and improve the speed and accuracy of information gathering. But the possibility of lower bank revenues due to the introduction of new competitors could push banks to take on greater risk (Rakshit and Bardhan, 2022).

2.3. FINTECH and UN SDGs

The phrase "sustainable development" combines the terms "development," which denotes promoting progress and wealth, and "sustainable," which denotes durability or long-term plans or aims (Mpofu, 2024). Thus, sustainable development refers to maximizing the potential of resources with a long-term perspective. The idea is that, as the present generation utilizes resources to advance the economic, social, and environmental spheres, they also keep the needs of the next generation in mind (Makina, 2019). While conserving resources, sustainable development creates a better future for coming generations. Sustainability is the root of the term "sustainable development." The 2030 Sustainable Development Goals (SDGs) are aided by fintech (Chueca & Ferruz, 2021). By enhancing financial inclusion and facilitating cost-effective funding access, fintech can support sustainable growth and sustainability in developing nations (Ebong & George, 2021). It is crucial to stress that without sufficient financial resources or a well-functioning financial system, it is impossible to accomplish any of the SDGs, even though none of them specifically address finance or financial services. Studies have indicated that nine out of the seventeen Sustainable Development Goals (SDGs)—1, 2, 3, 5, 8, 9, 10, 12, and 17—cannot be achieved without financial inclusion (Allmen et al., 2020; Ahmad et al., 2021). According to the 2024 Global System for Mobile Communications (GSMA) report, digital financial inclusion would enable the achievement of 15 out of the 17 Sustainable Development Goals (SDGs). Similarly, Mpofu (2022) noted that the 17 SDGs and the economy's ability to obtain dependable financing are related. The study contends that rather than being divided, the SDGs are connected. These fit into the three categories of sustainable development—the social, environmental, and economic components.

2.4. Challenges to the Operations of FINTECH Companies

The emergence of fintech has not only enhanced financial inclusivity but also reinforced the partnerships and reliance among banks and also fintech companies (Shim & Shin, 2016). Risk-taking and competition are affected by this (Mocetti et al., 2017). Fintech has the ability to increase bank risk management standards, decrease the cost of information retrieval, and improve the speed and accuracy of information gathering. But the possibility of lower bank revenues due to the introduction of new competitors could push banks to take on greater risk (Rakshit & Bardhan, 2022).

3. Conclusion

Fintech has empowered people and sparked the expansion of small businesses by greatly increasing access to banking, savings, credit, and investment options. Financial literacy has increased because to educational features on fintech platforms, albeit the advantages differ depending on the demographic. Due to their superior digital infrastructure, urban areas continue to benefit more from fintech, but regional inequities continue to be a problem. Furthermore, trust difficulties and security concerns continue to be major obstacles to wider use. For fintech to continue growing and to maximize its contribution to financial inclusion in all regions, a favorable regulatory framework must be established.

Returning to the original query, can FINTECH help address financial inclusion challenges in Nigeria? Based on the review carried out, the conclusion is drawn that FINTECH is an important financial institution in Nigeria and economies worldwide, impacting almost every economic area. The fact that it benefits both urban and rural residents and is helpful in providing services for both the wealthy and the impoverished is equally significant. Put differently, it's a financial technology that caters to everyone and everything. If there are no strict rules and few technological advancements, FINTECH can benefit everyone.

4. Recommendations

To encourage better adoption, digital products should be made to better meet the unique characteristics of the financially excluded (such as language, type of mobile device owned, and degree of digital technology expertise). FinTech apps, for example, might be made to allow users to choose their preferred local language or provide distinct user interfaces for beginners, intermediate, and advanced users according to their degree of digital technology proficiency.

In order to improve financial inclusion, efforts should be taken to ensure that DFS agents are capable of providing important extra value-added services like account opening and customer complaint resolution, rather

than only acting as cash points as is currently the case in Nigeria. For example, rather than requiring their clients to visit the bank, DFS agents ought to be able to report unsuccessful POS transactions to financial institutions on their behalf.

Concerted effort should be directed at promoting digital financial literacy especially among the financially excluded. This will not only enable them to have a better understanding of the benefits of being included, but also allay their fears of adopting digital financial services, all of which may have positive effects on financial inclusion.

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