



THE IMPACT OF DIGITAL FINANCIAL INCLUSION ON WOMEN'S ECONOMIC EMPOWERMENT IN NIGERIA

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Abstract

This study examines how digital financial inclusion influences women's economic empowerment in Oyo State, Nigeria. Financial inclusion, which includes access to savings, credit, insurance, payments, and pensions, is vital for reducing poverty and fostering inclusive growth (Central Bank of Nigeria [CBN], 2020). Despite global advancements, women in developing economies still encounter obstacles, including restricted identification, inadequate digital literacy, and socio-cultural constraints (World Bank, 2021). Data were gathered from 400 women in semi-urban regions of Oyo State through a quantitative survey conducted between June 2025 and March 2026. Chi-square analysis identified significant associations, including a link between mobile money usage and household decision-making power ($\chi^2 = 12.45$, $p < 0.05$), a correlation between bank account ownership and business expansion ($\chi^2 = 9.32$, $p < 0.05$), and an association between digital literacy and resilience to financial shocks ($\chi^2 = 7.89$, $p < 0.05$). These results demonstrate that digital financial inclusion boosts women's involvement in household decisions and entrepreneurship while strengthening financial stability, ultimately aiding in poverty alleviation. Policy recommendations encompass expanding mobile money infrastructure, advancing digital literacy initiatives, and creating inclusive credit programmes specifically designed to meet women's needs.

Keywords: Digital Financial Inclusion, Financial Inclusion, Digital Finance, Women's Economic Empowerment, Oyo State



Introduction

Financial inclusion, as defined by the Central Bank of Nigeria (2020), denotes the availability and accessibility of affordable and appropriate financial products including savings, credit, insurance, payments, and pensions for all adults, with a specific focus on low-income populations. It highlights the importance of providing affordable basic banking services to marginalized groups, such as women, who are frequently excluded from the formal financial system. Financial inclusion is particularly important for low-income households and other financially underserved groups because access to appropriate financial services can enable individuals to save, invest, manage risks, undertake productive activities, and respond more effectively to economic shocks. Consequently, financial inclusion has increasingly been recognised as an important instrument for poverty reduction, income generation, and inclusive economic growth.

The emergence of digital technologies has significantly transformed the delivery and use of financial services. Digital financial inclusion (DFI) refers to the use of digital technologies, infrastructure, and financial platforms to provide individuals and businesses with convenient, affordable, and accessible financial services. These services include mobile money, mobile banking, electronic payments, digital savings, digital credit, agent banking, and other technology-enabled financial products. By reducing geographical and transaction costs, digital financial services can extend financial access to people who may otherwise face difficulties using conventional banking services (World Bank, 2021; United Nations Development Programme [UNDP], 2018). Digital platforms are particularly relevant to women because they can reduce some of the physical, time, and mobility constraints associated with traditional financial institutions.

Women's economic empowerment has also become an important development priority because women's participation in economic activities contributes to household welfare, poverty reduction, entrepreneurship, employment, and broader economic development. Women's economic empowerment involves the ability of women to access and control economic resources, make decisions concerning the use of those resources, participate in productive activities, own or manage businesses, earn income, and exercise greater influence over economic decisions within households and communities (UN Women, 2024). However, women in many developing economies continue to experience barriers to economic empowerment, including limited access to productive assets and finance, unequal employment opportunities, restrictive social norms, inadequate digital skills, and disproportionate responsibility for unpaid care work.

The relationship between financial inclusion and women's economic empowerment is particularly important because access to financial services can strengthen women's capacity to control income, accumulate savings, invest in businesses, and manage economic risks. Savings accounts can provide women with greater control over their financial resources, while credit can facilitate investment in businesses and other income-generating activities. Insurance and other risk-management instruments can also improve women's ability to cope with unexpected economic shocks. Digital financial services can potentially strengthen these benefits by allowing women to conduct financial transactions remotely and at relatively lower costs (World Bank, 2021; UN Women, 2024).

On a global scale, women's economic empowerment has emerged as a key development priority, particularly in emerging economies where persistent gender disparities continue to limit access to financial resources, employment opportunities, and decision-making power (Park & Mercado, 2018; Sahay et al. 2020). Women play a vital role in driving economic growth and are acknowledged for their efficient use of resources (Loko & Yang, 2022). However, systemic barriers including regulatory, socio-economic, and cultural obstacles often impede their integration into formal financial systems (Geraldes et al. 2022). According to the 2021 Global Findex Database from the World Bank, the gender gap in financial access has narrowed, with 78 percent of men and 74 percent of women owning bank accounts. However, in developing economies, the gap persists, with 74 percent of men having bank accounts compared to 68 percent of women. Persistent barriers, including lack of identification, limited mobile



phone ownership, distance from financial institutions, and low financial literacy, continue to hinder women's participation in the formal financial system (Chinoda & Kapingura, 2024).

From the authors' computations in the year 2026, there is a steady rise in Nigeria's Digital Financial Inclusion (DFI), climbing from 23. 6% in 2008 to 68. 5% by 2025. This reflects a substantial enhancement in access to digital financial services, propelled by the expansion of mobile banking, fintech, electronic payments, and government-led financial inclusion programs. This upward trend indicates improved financial access, which is anticipated to bolster economic activity, curb financial exclusion, and advance women's economic empowerment. Research indicates that financial inclusion for women generates numerous advantages, such as increased control over household expenditures, decreased dependence on volatile income streams, and improved capacity to withstand unforeseen financial disruptions (Suri & Jack, 2016; Batista & Vicente, 2020).

In Oyo State, where women participate extensively in petty trading, agriculture, services, small-scale businesses, and other income-generating activities, access to appropriate financial services is potentially important for improving their economic position. However, limited access to formal financial institutions, inadequate digital literacy, financial constraints, and other socio-economic barriers may restrict the ability of women to benefit from the growing digital financial ecosystem. Understanding whether and how digital financial inclusion contributes to women's economic empowerment is therefore important for designing policies that promote inclusive development at the state and national levels.

Against this background, this study examines the impact of digital financial inclusion on women's economic empowerment in Oyo State, Nigeria. Specifically, the study focuses on the relationship between women's access to and use of digital financial services and selected indicators of economic empowerment, including household decision-making power, business expansion, and resilience to financial shocks. By examining these relationships among women in selected semi-urban areas of Oyo State, the study seeks to contribute to the growing literature on digital financial inclusion and gender empowerment in Nigeria and provide evidence that can guide policies aimed at reducing financial exclusion, promoting women's entrepreneurship, and improving household economic welfare.

Literature Review

Concept of Financial Inclusion

Financial inclusion is a cornerstone of economic development, as it empowers individuals and businesses to engage in the formal economy by providing affordable access to payments, savings, credit, insurance, and other financial services (World Bank, 2022). While account ownership serves as a gateway, the World Bank (2022) notes that meaningful inclusion also depends on affordability, regular usage, and the suitability of services. Obstacles such as low income, distance from institutions, lack of documentation, and limited digital access disproportionately affect poor households, women, youth, and rural populations (World Bank, 2022). Globally, women continue to experience lower financial inclusion than men, as evidenced by 2021 data from the World Bank showing that 68% of women in developing economies held bank accounts compared to 74% of men. In Nigeria, the disparity is even more pronounced, with only 35% of women compared to 55% of men holding bank accounts in 2021 (World Bank, 2021).

Technological innovations such as mobile money, agent banking, and fintech platforms have broadened access, particularly in sub-Saharan Africa, where 33% of adults held mobile-money accounts in 2021 (World Bank, 2022). However, achieving digital inclusion relies on robust infrastructure, affordable access, and digital literacy (United Nations Development Programme [UNDP], 2018). Consequently, financial inclusion is a multifaceted concept encompassing access, affordability, availability, and effective utilization, which is especially pertinent to women's empowerment (UN Women, 2024). Following its 2010 commitment to the Maya Declaration, Nigeria reinforced its financial inclusion framework by launching the National Financial Inclusion Strategy (NFIS) in 2012 (CBN, 2012).



Nigeria's National Financial Inclusion Strategy (NFIS)

The strategy sought to minimize exclusion and broaden access to payments, savings, credit, insurance, and pensions. It highlighted the importance of accessibility, affordability, and effective usage, particularly for women, rural residents, youth, and low-income households (Central Bank of Nigeria [CBN], 2012). Regulatory reforms facilitated implementation through measures such as tiered Know-Your-Customer rules, agent banking, mobile money, electronic payments, and financial literacy programs (CBN, 2012). These alternative channels mitigated the high expenses associated with branch-based banking in remote regions. Enhancing Financial Innovation & Access (2023), formal financial inclusion increased from 56% in 2020 to 64% by 2023, while financial exclusion decreased from 32% to 26% during the same period. However, significant gaps persist, especially among women and rural communities (World Bank, 2022).

Women's Economic Empowerment entails securing control over economic choices, accessing productive assets, securing employment, and entering markets (UN Women, 2024). Although women make significant contributions to employment, entrepreneurship, agriculture, and care work, they continue to encounter obstacles including discriminatory laws, restrictive social norms, unequal access to assets, and the burden of unpaid care (UNDP, 2024). Access to finance is essential, as savings, credit, and payment services empower women to establish businesses, accumulate assets, and manage economic shocks (UN Women, 2024). Global frameworks such as CEDAW, the Beijing Declaration, and the SDGs underscore the importance of ensuring equal access to resources and opportunities (UN Women, 2024). In Nigeria, the disparity in account ownership between genders underscores the necessity of integrating women's financial inclusion into empowerment initiatives (World Bank, 2021).

Role of Financial and Digital Inclusion in Empowerment

Financial inclusion can support women's economic empowerment by expanding access to savings, credit, insurance, and payment services, while digital financial services can further reduce geographical and transaction barriers (World Bank, 2022; UNDP, 2018). For women entrepreneurs, improved financial access can facilitate business investment, savings, and market participation. However, the benefits of digital financial inclusion depend on complementary factors such as digital literacy, affordable connectivity, adequate infrastructure, and consumer protection (World Bank, 2022; UN Women, 2024).

Interconnected Relationship Financial inclusion.

Digital inclusion, and women's empowerment are deeply interconnected. According to the World Bank (2022), savings accumulate assets, credit enables investment, insurance mitigates vulnerability, and digital payments enhance market participation. Nevertheless, mere account ownership does not ensure empowerment, as social norms, asset possession, and decision-making authority remain essential factors (UN Women, 2024). Therefore, inclusion must be viewed as an enabling mechanism that calls for complementary policies to tackle literacy, entrepreneurship, market access, and discriminatory barriers (UNDP, 2024). For Nigeria, enhancing women's financial and digital inclusion is essential to fostering entrepreneurship, employment, and inclusive growth. Given the persistent gender gaps and the expansion of digital services, this area has become a key priority for both policy and research (EFInA, 2023; World Bank, 2021).

Empirical Review

Empirical Review Studies on financial inclusion reveal enduring gender gaps across various regions. For instance, Khmous and Besim (2020) found that men, wealthier individuals, and older populations in Middle East and North Africa (MENA) countries are more likely to achieve financial inclusion, whereas a higher prevalence of Islamic banking is associated with lower inclusion rates. Similarly, Fungáčová and Weill (2015) found that while women in China are equally likely to save formally, they



are less likely to hold formal accounts or loans. Research has demonstrated that the emergence of digital financial technologies helps narrow these gaps. The study by Sahay et al. A 2020 study demonstrated that FinTech enhances financial inclusion and narrows gender disparities compared to traditional banking.

Loko and Yang (2022) highlighted the potential of digital financial technologies to improve women's access to financial services by reducing some of the barriers associated with traditional banking. Digital platforms can provide greater convenience, privacy, and security while enabling women, particularly those who are underserved by conventional financial institutions, to access and manage financial resources. Similarly, Adegbite and Machethe (2020) found that digital financial inclusion can contribute to narrowing gender disparities in access to financial services across Africa. However, the benefits of digital financial inclusion are not uniform across countries. Khera et al. (2022) found that the effects of digital financial services on gender inclusion vary according to country-specific institutional, economic, and socio-economic conditions. This suggests that the availability of digital financial services alone may not automatically translate into women's economic empowerment; complementary factors such as digital literacy, infrastructure, affordability, institutional quality, and supportive policies are also important. In addition to improving access to financial services, the expansion of FinTech has been associated with broader socio-economic outcomes, including improved employment opportunities and greater income equality for women (Loko & Yang, 2022; Sioson & Kim, 2019).

Scholars also emphasize that financial inclusion is not merely a supply-side concern but necessitates addressing demand-side barriers. The study by Geraldine and colleagues (2022) contended that inadequate financial literacy and restricted human capital impede the effective use of financial services. This challenge is especially pronounced in Sub-Saharan Africa (SSA), where limited awareness and understanding hinder the advantages of financial inclusion (Azam, 2024; Chinoda & Kapingura, 2024). There is a consistent connection between financial inclusion, poverty reduction, and inclusive growth. Park and Mercado (2018) emphasized its capacity to alleviate poverty and income inequality by facilitating long-term consumption and investment, engagement in productive activities, and resilience against short-term shocks.

Ifediora and colleagues. A 2022 study examining 22 SSA countries from 2012 to 2018 concluded that financial inclusion significantly drives economic growth, with mobile money transactions playing a pivotal role. Chinoda and Kapingura (2024) further demonstrated that governance and institutional quality positively moderate the relationship between digital financial inclusion and economic growth in SSA, whereas inflation exerts a negative effect. Data from East Africa highlights the transformative power of mobile money. Using a difference-in-differences approach, Suri and Jack (2016) discovered that M-Pesa reduced extreme poverty in rural Kenya by 2%, with women benefiting particularly. Similarly, Batista and Vicente (2020) demonstrated through a randomized controlled trial in Mozambique that mobile money services boosted savings and consumption, particularly within female-headed households, thus aiding in poverty alleviation.

Theoretical Review

Financial Inclusion Theory offers a conceptual framework for understanding how access to affordable and suitable financial services fosters economic development, alleviates poverty, and enhances household well-being. This theory suggests that when marginalized populations, especially women, low-income individuals, and those outside the formal financial system, gain access to savings, credit, insurance, and payment services, they become better equipped to pursue productive activities. This access empowers individuals to save, borrow, invest, and manage risks more effectively, which boosts income generation, raises living standards, and promotes inclusive economic growth. The global prominence of financial inclusion has been propelled by organizations like the World Bank, the Alliance for Financial Inclusion (AFI), and the United Nations, all of which highlight its critical role in sustainable development. Over the past few years, digital innovations such as mobile banking, online



payment platforms, and mobile money have transformed financial inclusion by broadening access to financial services, especially within developing economies.

Application of Financial Inclusion

In Nigeria, digital financial inclusion has advanced through mobile banking, agent banking, electronic payment systems, and the growth of financial technology (fintech) companies. Policies introduced by the Central Bank of Nigeria (CBN) have sought to increase access to financial services among underserved populations, with a particular focus on women and rural communities. Despite these initiatives, several challenges continue to hinder women's full participation in the digital financial ecosystem. These include low levels of financial literacy, poor internet connectivity, gender inequality, inadequate digital infrastructure, cybersecurity risks, and limited smartphone ownership.

Financial Inclusion Theory suggests that addressing these barriers by improving digital infrastructure, enhancing financial literacy, strengthening consumer protection, and expanding the reach of digital financial services—will significantly increase women's economic empowerment. In turn, this empowerment is expected to contribute to poverty reduction and inclusive growth within Nigeria.

Methodology

The study adopted a quantitative correlational survey research design to examine the relationship between digital financial inclusion and women's economic empowerment in Oyo State, Nigeria. The design was appropriate because the study examined associations between the variables. The study was conducted in Oyo State, Nigeria, covering six Local Government Areas (LGAs): Ido, Oriire, Ogbomosho North, Ibadan South-West, Ibadan North, and Oluyole. The selected LGAs represent diverse socio-economic settings and provided coverage of women engaged in petty trading, small businesses, farming, services, and other income-generating activities. The population comprised women residing in the selected towns and communities within the six LGAs who were economically active and/or participated in household and personal financial decision-making. A total of 400 women participated in the study. Respondents were selected from the six LGAs to provide information on access to digital financial services and women's economic empowerment. The study employed simple random sampling. Eligible women in the selected towns and communities were randomly selected, giving each qualified respondent an equal opportunity of participation and reducing selection bias. Primary data were collected using a structured questionnaire covering bank account ownership, mobile money usage, access to credit, digital financial literacy, and indicators of women's economic empowerment. Data were collected and all 400 questionnaires administered were completed and returned, giving a 100% response rate. Data were analysed using frequencies, percentages, and the Pearson Chi-square test of independence. The Chi-square test was used to examine the association between:

1. Mobile money usage and household decision-making power;
2. Bank account ownership and business expansion; and
3. Digital literacy and resilience to financial shocks.

The hypotheses were tested at a 5% significance level ($\alpha = 0.05$). The null hypothesis was rejected where the p-value was less than 0.05 and not rejected where the p-value was greater than 0.05.



Results

Table 1: Access to Financial Services (N = 400)

Variables	Yes (%)	No (%)
Ownership of the bank account	65	35
User of Mobile money	72	28
Mobile money usage	40	60
Accessibility to credit	55	45

Author's Computation, 2026.

Table 2: Economic Empowerment Indicators

Variables	Yes (%)	No (%)
Decision-making power by household	70	30
Expansion of business	60	40
Resilience to shocks	68	32
Living standards improvement	65	35

Author's Computation, 2026.

Table 3: Chi-Square Test Results

Variable Pair	χ^2 Value	df
Mobile money usage vs. household decision-making	12.45	1
Bank account ownership vs. business expansion	9.32	1
Digital literacy vs. resilience to shocks.	7.89	1

Author's Computation, 2026.

Findings

Women with mobile money access are significantly more likely to report greater household decision-making power.

Bank account ownership is positively associated with business expansion, showing financial inclusion drives entrepreneurship.

Digital literacy strongly correlates with resilience to financial shocks, highlighting the importance of training.

Conclusion

The study on the impact of digital financial inclusion on women's economic empowerment in Oyo State, Nigeria reveals that access to financial services particularly mobile money platforms, bank accounts, and digital literacy significantly enhances women's ability to participate in household decision-making, expand businesses, stabilize income, and build resilience against financial shocks. Chi-square analysis provided statistical evidence that: Mobile money usage is strongly associated with household decision-making power. Bank account ownership correlates with business expansion. Digital literacy is linked to resilience to financial shocks. These findings confirm that digital financial inclusion is a critical driver of women's economic empowerment and poverty reduction in Oyo State.

Recommendations

The study recommends the following:

1. **Expand Mobile Money Infrastructure** Increase mobile money agents in rural communities to reduce distance barriers. Encourage partnerships between fintech firms and traditional banks.



2. Promote Digital Literacy Programs Government and NGOs should provide training on mobile apps, online banking, and financial management. Tailor programs for women with low formal education.
3. Inclusive Credit Schemes Develop micro-loan programs with flexible collateral requirements. Prioritize women-led businesses in credit allocation.

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