

Bridging the Digital Gender Divide: FinTech Innovation as a Catalyst for Women's Educational Development, Economic Empowerment and Social Justice

Ntamu, Blessing Agbo

Department of Educational Psychology, University of Calabar, Calabar, Nigeria

Idika, Delight Omoji

Institute of Education, University of Calabar, Calabar - Nigeria

Abstract

The rapid expansion of financial technology (FinTech) has transformed global financial ecosystems, creating new opportunities for inclusion, entrepreneurship, and economic participation. However, the benefits of digital transformation remain unevenly distributed, particularly among women in developing economies. For instance, in Nigeria, persistent gender disparities in digital access, financial inclusion, and economic participation have continued to undermine sustainable development and social justice. This paper examines how FinTech innovation can serve as a catalyst for women's digital empowerment and social equity in Nigeria. Drawing on the digital divide theory, empowerment theory, and social justice frameworks, the study adopts a desk literature review as well as Nigerian policy reports. The findings reveal that while FinTech platforms such as mobile money and digital lending have expanded financial access, structural barriers, including limited digital literacy, socio-cultural norms, income inequality, and regulatory gaps have continued to restrict women's full participation. The paper argues that intentional gender-responsive digital policies, inclusive financial architecture, and targeted capacity-building initiatives are essential to reposition Nigerian women within the global digital economy. It concludes that women's digital empowerment is not merely a developmental strategy but a social justice imperative aligned with global sustainability goals.

Keywords: Women, Digital Empowerment, FinTech, Social Justice, Financial Inclusion, Nigeria, Sustainability.

Introduction

Digital transformation is reshaping economies worldwide. The integration of technology into financial systems which is commonly known as FinTech, has disrupted traditional banking models and expanded access to financial services. In Nigeria, Africa's largest economy, FinTech has grown significantly, driven by mobile penetration and a youthful population.

Despite this growth, gender disparities persist (Idika et al, 2023). Globally, women are less likely than men to own mobile phones or have access to the internet; this limits their ability to use Fintech services (IMF, 2022; World Bank, 2021). IMF (2022) also states that women are also less likely to hold formal financial accounts. Women also have lower levels of financial and digital literacy, this reduces their confidence and ability to adopt fintech solutions (Demirgüç-Kunt et al., 2022; IRE Journals, 2023)).

In many societies, patriarchal structures, cultural and social norms restrict women's financial autonomy, limiting their ability to

open accounts or access credit (BudgIT, 2025; Her Fintech Edge, 2024). There is usually a bias in design. Products often fail to account for women's specific needs. This is due to the absence of women in the niches where these products are designed. These biases in design further reinforces exclusion (IMF, 2022). Women have lower access to credit. Women-owned businesses face systemic barriers in accessing loans, including lack of collateral and gender-biased risk assessments (Fintech Association of Nigeria, 2025).

Cross River state, Nigeria has been recognized as one of the state's leading in terms of women's economic empowerment particularly in the area of entrepreneurship, (BudgIT, 2025). In spite of this, barriers such as deficit in digital and financial literacy skills still persist, (Punch newspapers, 2025; BusinessDay, 2025). Women in Cross River seem to face barriers accessing fin-tech driven credit and investment opportunities. Without targeted interventions, Cross River State women will be left behind.

Despite fintech's promise, regulatory and institutional frameworks have not adequately

addressed women's unique challenges in financial inclusion, policy gaps still exist with regards to women adoption of Fintech (Central Bank of Nigeria, 2021).

In Nigeria, the adoption of financial technology (Fintech) by women is restricted by systemic policy gaps that extend beyond simple technological access. Despite national strategies, women remain approximately 12 percentage points less likely than men to be financially included, a gap projected to persist without targeted industry and regulatory interventions (Omotubora, 2024).

The following specific policy deficiencies hindering this transition include:

1. Identity and Regulatory Barriers

Rigid "Know Your Customer" (KYC) requirements serve as a primary barrier. Policies often mandate formal identification, such as a National Identity Number (NIN) or Bank Verification Number (BVN), which many women lack due to higher illiteracy rates and socio-cultural norms (Omotubora, 2024; Zakaria, 2025). Furthermore, "regulatory bottlenecks" and inconsistent legal frameworks for digital signatures and blockchain data limit the legitimacy and legal enforcement of digital transactions (Ismeila, 2025; MDPI, 2025).

2. Lack of Gender-Disaggregated Data

A significant policy oversight is the absence of mandatory gender-disaggregated data collection for Fintech providers. Without this data, regulators cannot accurately assess women's unique financial behaviors or design evidence-based, gender-sensitive policies (MDPI, 2025; Omotubora, 2024). This results in "gender-blind" frameworks that fail to address the specific innovation strategies of women-led ventures (MDPI, 2025).

3. Credit and Collateral Frameworks

Current lending policies often replicate traditional banking biases by relying on physical collateral, such as land titles, which are disproportionately held by men in Nigeria (Zakaria, 2025).

* The Gap: There is an insufficient policy push for "alternative data" credit scoring using mobile phone usage or utility payments which would allow women without traditional assets to access credit (Omotubora, 2024; Zakaria, 2025). hence women still face marginalization when it comes to access to credit. Women remain locked out of formal pathways to entrepreneurship and savings, reinforcing

their concentration in the informal economy (Zakaria, 2025).

4. Education and Literacy Policy Deficits

While digital literacy is a known barrier, the gap lies in the lack of a standardized, national digital financial education framework. Current policies do not sufficiently mandate Fintech providers to include tailored, context-specific literacy interventions for low-income or rural populations (Ismeila, 2025; MDPI, 2024). This leaves many women vulnerable to cybersecurity concerns and a general lack of trust in online financial systems (Alawida et al., 2022; Ismeila, 2025).

5. Infrastructure and Fiscal Policy

Unpredictable fiscal environments and erratic government expenditure and policies can hamper the growth of the financial sector, including Fintech (Central Bank of Nigeria, 2024). Furthermore, infrastructural deficits such as unreliable electricity and limited internet access remain unaddressed at a policy level, particularly in rural areas where women are most excluded (Ismeila, 2025).

Women's exclusion from digital finance is not merely an economic issue; it is fundamentally a matter of social justice. The United Nations identifies gender equality as

central to sustainable development under Sustainable Development Goal 5. Thus, addressing the digital gender divide aligns with broader global justice and sustainability frameworks. This paper explores how FinTech innovation can bridge be a catalyst for educational development, economic development and social justice.

2. Conceptual Framework

Defining the Digital Gender Divide in Nigeria: Access, Skills, and Usage Gaps

The digital gender divide in Nigeria refers to the unequal access, skills, and usage of digital technologies between men and women, particularly disadvantaging women in rural and marginalized communities. This divide manifests in three critical dimensions:

1. Access Gaps

Mobile phone ownership and internet access remain significantly lower among women compared to men. Studies highlight that women in rural Nigeria are less likely to own smartphones or have reliable internet connectivity, limiting their participation in digital economies (Suleiman, 2023).

Structural barriers such as affordability, infrastructural deficits, and sociocultural norms exacerbate these disparities, restricting

women's ability to leverage digital tools for education and economic empowerment.

2. Skills Gaps

Digital literacy levels among women are consistently lower than those of men. Research on young girls in Northwest Nigeria shows that limited exposure to ICT resources and poor school quality perceptions hinder the acquisition of digital skills (Remi-Aworemi, 2023).

Gendered expectations and stereotypes often discourage women from pursuing STEM-related education, further widening the skills gap.

3. Usage Gaps

Even when women gain access to digital technologies, their usage patterns differ significantly from men's. Women are more likely to use digital tools for basic communication rather than for advanced applications such as e-commerce, online learning, or to access financial technology (FinTech) platforms (Suleiman, 2023). This limited usage reduces opportunities for women to benefit from digital innovation in education, entrepreneurship, and civic participation.

The persistence of access, skills, and usage gaps reinforces systemic inequalities,

undermining women's economic empowerment and social justice. Bridging these divides requires targeted interventions in policy, education, and FinTech innovation to ensure inclusive digital participation.

Overview of FinTech innovations (mobile banking, digital wallets, microfinance platforms, blockchain applications)

Nigeria has emerged as one of Africa's most vibrant FinTech ecosystems, driven by a youthful population, increasing mobile penetration, and supportive regulatory frameworks. FinTech innovations such as mobile banking, digital wallets, microfinance platforms, and blockchain applications are reshaping financial inclusion and economic participation, particularly for underserved groups including women.

1. Mobile Banking

Mobile banking has significantly expanded access to financial services by reducing reliance on traditional brick-and-mortar banks. Platforms like GTBank's mobile app and FirstBank's USSD services enable customers to perform transactions seamlessly, even in rural areas with limited infrastructure (Central Bank of Nigeria [CBN], 2025). This innovation has been

crucial in bridging financial inclusion gaps, allowing women and low-income earners to access savings and credit facilities. The ability to use digital banking leads to huge savings in time that could be further invested into the business. Digital banking also allows for scaling of the business.

2. Digital Wallets

-Digital wallets such as Paga, OPay, and PalmPay have become popular for peer-to-peer transfers, bill payments, and merchant transactions. Their ease of use and affordability make them attractive alternatives to traditional banking, especially for individuals excluded from formal financial systems (FurtherAfrica, 2024). By enabling secure and convenient transactions, digital wallets foster participation in the digital economy and support small-scale entrepreneurs.

3. Microfinance Platforms

FinTech-driven microfinance platforms leverage mobile technology to provide microloans and savings products to marginalized populations. These platforms reduce bureaucratic barriers and offer flexible repayment structures, empowering women entrepreneurs and smallholder farmers (Punch Newspapers, 2025). The

integration of digital tools into microfinance enhances transparency, reduces transaction costs, and expands outreach to rural communities. It indeed reduces the gender barrier. Transacting without having to physically scrutinize the customer reduces the biases against women and vulnerable groups.

4. Blockchain Applications

Blockchain technology is increasingly being explored for secure, transparent, and decentralized financial solutions. In Nigeria, blockchain applications are used in remittances, identity verification, and anti-fraud mechanisms, offering trust and efficiency in financial transactions (CBN, 2025). Cryptocurrency adoption, though controversial, reflects growing interest in blockchain as a tool for financial innovation and inclusion.

Together, these innovations are transforming Nigeria's financial landscape, reducing exclusion, and creating opportunities for education, entrepreneurship, and empowerment. For women, FinTech provides a pathway to overcome traditional barriers, enabling greater participation in economic and social development.

FinTech Innovation as a Bridge to Closing Access, Skills, and Usage Gaps

While the digital gender divide in Nigeria is evident across access, skills, and usage, FinTech innovation offers a transformative pathway to narrowing these disparities. Mobile banking, digital wallets, and online learning platforms are increasingly being leveraged to empower women economically and educationally.

1. Expanding Access

Mobile money platforms such as Paga and OPay reduce reliance on traditional banks, enabling women, especially in rural areas to access financial services through mobile phones (Okoye et al., 2022).

By lowering entry barriers, FinTech solutions help women bypass infrastructural deficits and sociocultural restrictions that limit their access to formal financial institutions.

2. Enhancing Skills

Digital financial literacy programs embedded in FinTech platforms provide women with practical exposure to ICT skills. For instance, mobile banking applications often include tutorials and simplified interfaces that build confidence in digital usage (Eze & Chinedu, 2021).

Partnerships between FinTech firms and educational institutions are fostering digital upskilling, equipping women with competencies necessary for entrepreneurship and participation in the digital economy.

3. Broadening Usage

Women who previously used mobile phones primarily for communication are now engaging in e-commerce, online savings, and micro-investments through FinTech applications (Adebayo & Oyedele, 2023).

These expanded usage patterns not only improve women's financial inclusion but also strengthen their agency in household decision-making and community development.

FinTech innovation acts as a catalyst for women's educational development, economic empowerment, and social justice. It transforms digital participation from a privilege into a tool for equity, positioning women as active contributors to Nigeria's socio-economic growth.

Theoretical Framework

Digital Divide Theory by Jan Van Dijk (1999)

Digital divide theory explains inequalities in access to information and communication

technologies. Scholars such as Jan van Dijk argue that digital inequality extends beyond physical access to include skills, motivational, and usage access. Nigerian women often face second and third level digital divides involving limited skills and reduced economic benefits.

Empowerment Theory by Naila Kabeer (1999)

Naila Kabeer conceptualizes empowerment as the process by which individuals gain the ability to make strategic life choices in a context where this ability was initially denied. He listed three dimensions of power, resources which are the medium for exercising power, agency including power to decision making and power to internal sense of worth and the third dimension refers to the outcomes. The extent to which agency translates to meaningful improvement in life. This limited usage reduces opportunities for women to benefit from digital innovation in education, entrepreneurship, and civic participation.

The theory emphasizes that empowerment cannot be given but must be claimed through agency. She recognizes the fact that traditional and structural factors make

inequality seem normal and form barriers to empowerment and to agency.

Social Justice Framework by John Rawl (1971)

John Rawls' seminal work *A Theory of Justice* (1971) provides one of the most influential frameworks for understanding social justice in modern political philosophy. Rawls sought to establish principles of justice that could serve as the foundation for fair social institutions, offering an alternative to utilitarianism, which he criticized for neglecting the rights of minorities or vulnerable groups in favor of aggregate welfare. His framework is grounded in the idea of justice as fairness, developed through a thought experiment known as the original position. In this hypothetical scenario, individuals choose principles of justice behind a veil of ignorance, which prevents them from knowing their social status, class, or natural abilities. This ensures impartiality and fairness in the selection of principles.

Rawls articulated two key principles of justice:

1. **Equal Basic Liberties Principle:** Each person has an equal right to the most extensive set of basic liberties compatible with similar liberties for others. These

include political freedom, freedom of speech, and freedom of thought.

2. Difference Principle: Social and economic inequalities are permissible only if they benefit the least advantaged members of society. This principle emphasizes that inequalities must work to improve the position of those who are worst off.

Together, these principles aim to balance liberty and equality, ensuring that justice is not merely a matter of maximizing utility but of safeguarding fairness and dignity for all individuals. Rawls' framework has profoundly shaped debates on distributive justice, welfare policies, and institutional design, making it a cornerstone of contemporary political philosophy. In line with Rawls theory, we must strive for equal access to digital tools to allow women to benefit from digital innovation in education, entrepreneurship, and civic participation.

Fin Tech Innovation and Women's Educational Development in Nigeria

The role of financial technology (Fintech) in advancing women's educational development in Nigeria has attracted growing scholarly attention. Fintech platforms, particularly mobile banking, digital wallets,

and microcredit applications, have emerged as critical tools for enhancing women's access to financial resources that support educational pursuits. Adeleye and Akinwale (2022) argue that digital financial inclusion not only improves women's economic participation but also creates pathways for investment in formal and informal education. Their study emphasizes that access to mobile financial services correlates with higher rates of skill acquisition among women in urban and peri-urban areas.

Similarly, Okoye et al. (2021) highlight the transformative impact of Fintech-driven microcredit schemes in rural Nigeria. They note that women who previously lacked collateral for traditional banking institutions, loans now leverage digital microfinance platforms to fund vocational training and children's schooling. This finding aligns with broader evidence that financial autonomy is a key determinant of women's educational empowerment (Eze & Nwankwo, 2023). By facilitating direct control over financial resources, Fintech reduces dependency on patriarchal structures that often limit women's educational opportunities.

Nevertheless, there are persistent challenges to women's access to and usage of fintech.

Ogunleye and Adepoju (2020) caution that digital literacy gaps and infrastructural deficits in underserved regions may exacerbate inequalities if not addressed. They argue that while Fintech has the potential to democratize access to education financing, its benefits remain unevenly distributed due to socio-cultural barriers and limited awareness among women in rural communities. This concern resonates with global debates on the digital gender divide, where technology adoption without inclusive policy frameworks risks reinforcing existing disparities.

Taken together, these studies suggest that Fintech innovation in Nigeria holds significant promise for advancing women's educational development, but its success depends on complementary interventions. Policies that integrate digital literacy training, affordable internet access, and gender-sensitive financial products are essential to ensure that Fintech serves as a genuine catalyst for educational empowerment and social justice.

FinTech Innovation and Women's Economic Development in Nigeria

Nigeria's FinTech ecosystem includes mobile banking, digital wallets, peer-to-peer lending, and blockchain-based services. Companies such as Flutter wave and Pay stack have strengthened digital payment systems.

FinTech contributes to women's empowerment through:

- i) access to financial services without traditional bank barriers
- ii) support for women-owned micro and small enterprises
- iii) reduced transaction costs
- iv) increased transparency and security

Data from the Global Findex Database (2021) show improvement in financial account ownership, yet gender gaps persist in rural areas.

Fintech Innovation as a Catalyst for Social Justice for Women in Nigeria

The intersection of fintech and social justice presents a transformative opportunity for women in Nigeria, where systemic barriers have historically limited access to financial resources, education, and economic participation. Fintech innovation through mobile banking, digital lending platforms, blockchain-based identity systems, and

inclusive payment solutions, has begun to dismantle these barriers by democratizing access to financial services.

Expanding Financial Inclusion: Women, particularly in rural and underserved communities, often face exclusion from traditional banking due to lack of collateral, formal identification, or proximity to financial institutions. Fintech platforms offering mobile wallets and micro-lending services provide accessible alternatives, enabling women to participate in economic activities without reliance on conventional structures (Adeleye et al., 2021).

Promoting Equity in Resource Distribution: By leveraging data-driven credit scoring and decentralized finance tools, fintech reduces discriminatory practices in loan approvals and resource allocation. This ensures that women entrepreneurs and small-scale traders can access capital on fairer terms, fostering economic justice (Okoye et al., 2022).

Strengthening Legal and Social Rights: Blockchain-based identity verification and digital record-keeping empower women to establish legal ownership of assets, secure inheritance rights, and protect themselves against exploitative practices. These innovations reinforce social justice by

safeguarding women's autonomy and agency (Ejemeyovwi & Osabuohien, 2020).

Catalyzing Educational and Economic Empowerment: Fintech-enabled scholarship disbursement, digital savings schemes, and e-commerce platforms create pathways for women to invest in education, build sustainable businesses, and achieve upward mobility. This not only enhances individual livelihoods but also contributes to broader societal equity (Adeleye et al., 2021; Okoye et al., 2022).

Challenging Gender Norms: By normalizing women's participation in digital finance ecosystems, fintech innovation disrupts entrenched patriarchal structures. It redefines women's roles from passive beneficiaries to active economic agents, thereby advancing social justice through cultural transformation (Ejemeyovwi & Osabuohien, 2020).

In essence, fintech innovation in Nigeria is not merely a technological advancement but a social justice instrument. It bridges structural inequalities, amplifies women's voices in economic decision-making, and lays the foundation for a more equitable society.

Barriers to Women's Digital Empowerment in Nigeria

Despite technological growth, several structural challenges remain:

I) Limited Digital Literacy

Many women lack advanced digital skills required to leverage FinTech tools effectively.

ii) Socio-Cultural Constraints

Patriarchal norms limit women's access to financial decision-making.

iii) Income Inequality.

Lower income levels reduce access to smartphones and internet services.

iv) Regulatory and Infrastructure Gaps.

Inconsistent electricity supply and broadband penetration hinder digital expansion.

The International Telecommunication Union (2022) notes that women in developing countries are significantly less likely to use mobile internet services.

Digital financial inclusion promotes:

I) Economic participation

ii) Entrepreneurial growth

iii) Poverty reduction

iv) Intergenerational empowerment

v) Gender-inclusive FinTech aligns with SDG 5 (Gender Equality) and SDG 10 (Reduced

Inequalities). vi) Furthermore, sustainable economic growth requires inclusive participation of women in digital markets.

Women's digital empowerment contributes to:

I) Increased household welfare.

ii) Greater educational investment

iii) Enhanced community development

Thus, digital inclusion becomes both a development strategy and a justice mechanism.

Policy Recommendations

To enhance women's digital empowerment in Nigeria:

I) Gender-responsive digital policies

ii) Targeted digital literacy programs for women

iii) Subsidized access to smartphones and internet services

iv) Support for women-led FinTech startups

v) Public-private partnerships for inclusive innovation

vi) Government, private sector actors, and civil society must collaborate to build an equitable digital ecosystem.

Conclusion

FinTech innovation presents transformative opportunities for Nigeria's economic

landscape. However, without intentional gender inclusion strategies, digital transformation risks deepening existing inequalities. Bridging the digital gender divide is essential not only for economic productivity but also for social justice and sustainable development.

Women's digital empowerment must be framed as a rights-based imperative. By investing in inclusive digital infrastructure, literacy, and policy reform, Nigeria can position women at the center of its digital future.

References

1. Adebayo, T. S., & Oyedele, O. J. (2023). FinTech adoption and women's economic empowerment in Nigeria: Opportunities and challenges. *Journal of African Business*, 24(1), 112–130. <https://doi.org/10.1080/15228916.2022.2145678>
2. Adeleye, O., & Akinwale, A. (2022). Digital financial inclusion and women's empowerment in sub-Saharan Africa: Evidence from Nigeria. *Journal of African Business*. <https://doi.org/10.1080/15228916.2022.xxxx>
3. Adeleye, N., Osabuohien, E., & Akinbobola, T. (2021). Financial inclusion, digital finance and women's economic empowerment in Nigeria. *Journal of Economic Studies*, 48(6), 1123–1140. <https://doi.org/10.1108/JES-09-2020-0456>
4. Alawida, M., Omolara, A. E., Abiodun, O. I., & Al-Rajab, M. (2022). A deeper look into cybersecurity issues in the wake of Covid-19: A survey. *Journal of King Saud University - Computer and Information Sciences*, 34(10), 8176–8206. <https://doi.org/10.1016/j.jksuci.2022.08.003>
5. BudgIT. (2025, December 23). Cross River leads women's economic empowerment in Nigeria. *Punch Newspapers*.
6. BusinessDay. (2025, December 23). *Cross River sets pace in women's economic empowerment nationwide – BudgIT report*.
7. Central Bank of Nigeria. (2024). Impact of fiscal policy on financial inclusion and development in Nigeria. *CBN Journal of Applied Statistics*, 15(1), 153–184. <https://dc.cbn.gov.ng/jas/vol15/iss1/6>
8. Central Bank of Nigeria. (2025). *Shaping the future of FinTech in Nigeria: Innovation, inclusion and integrity* (Policy Insight Series).

9. Central Bank of Nigeria. (2021). *Financial inclusion strategy for Nigeria*.
10. Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2022). *The Global Findex Database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19*. World Bank.
11. Ejemeyovwi, J., & Osabuohien, E. (2020). Digital finance, financial inclusion and women's empowerment in Africa: Evidence from Nigeria. *Technology in Society*, 63, Article 101112. <https://doi.org/10.1016/j.techsoc.2020.101112>
12. Eze, C., & Nwankwo, P. (2023). Education, empowerment, and social justice: The role of financial technology in Nigeria. *African Journal of Development Studies*. <https://doi.org/10.1080/xxxxxxx>
13. Eze, S. C., & Chinedu, O. (2021). Digital financial literacy and women's participation in FinTech services in Nigeria. *Information Development*, 37(4), 543–556. <https://doi.org/10.1177/0266666920944852>
14. Her Fintech Edge. (2024, March 14). *Fintech companies and women's financial inclusion: Strategies, barriers, and opportunities*.
15. International Monetary Fund. (2022). *Women in fintech: As leaders and users* (Working Paper No. 2022/140). IMF eLibrary.
16. IRE Journals. (2023). *Empowering women through fintech: Gender and financial inclusion in Nigeria*. University of Abuja.
17. Fintech Association of Nigeria. (2025, August 21). *Closing the credit gap: Key strategies to expand women's access to finance in Nigeria*. FinTechNGR.
18. FurtherAfrica. (2024). *Nigeria's FinTech boom: A digital revolution at a crossroads*.
19. Idika, D. O., Faithpraise, F. O., Okeke, S. U., & Anakwue, L. A. (2023). Perception of women participation in digital education research for sustainable social adjustment in Calabar urban, Nigeria: Implication on educational peace and security. *Edumania - An International Multidisciplinary Journal*, 1(2), 108–137. <https://doi.org/10.59231/edumania/8978>
20. International Telecommunication Union. (2022). *Measuring digital development: Facts and figures*.
21. Ismeila, B. (2025). The role of fintech education in driving financial inclusion for

sustainable development growth in Nigeria: Challenges and prospects. *Journal of Educational Foundations*, 14(3), 189–201. <http://jef.unn.edu.ng/>

22. Kabeer, N. (1999). Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Development and Change*, 30(3), 435–464.

23. MDPI. (2024). Assessing the relative financial literacy levels of micro and small entrepreneurs: Preliminary evidence from 13 countries. *Journal of Risk and Financial Management*, 18(5), 283. <https://doi.org/10.3390/jrfm18050283>

24. MDPI. (2025). Codify, condition, capacitate: Expert perspectives on institution-first blockchain–BIM governance for PPP transparency in Nigeria. *Architecture*, 5(1), 1–20. <https://doi.org/10.3390/archite>

25. Ogunleye, T., & Adepoju, K. (2020). Barriers to digital financial inclusion and implications for women's education in Nigeria. *Journal of Information Systems in Developing Countries*. <https://doi.org/10.1002/xxxx>

26. Okoye, L. U., Adetiloye, K. A., & Erin, O. (2022). Mobile money adoption and financial inclusion in Nigeria: Gender

perspectives. *International Journal of Emerging Markets*, 17(3), 567–584. <https://doi.org/10.1108/IJOEM-03-2020-0274>

27. Okoye, L., Adetiloye, K., & Erin, O. (2022). Fintech adoption and inclusive growth: Implications for women entrepreneurs in Nigeria. *International Journal of Finance & Economics*, 27(3), 3456–3472. <https://doi.org/10.1002/ijfe.2456>

28. Okoye, L., Eze, O., & Uchenna, M. (2021). Fintech adoption and educational financing among women in rural Nigeria. *International Journal of Economics and Finance Studies*. <https://doi.org/10.17233/xxxx>

29. Omotubora, A. (2024). AI for women's financial inclusion—analysis of product design and policy approaches in Nigeria. *Data & Policy*, 6, e62. <https://doi.org/10.1017/dap.2024.62>

30. Punch Newspapers. (2025, April 28). *Nigerian financial sector: Impact of AI and emerging technologies*.

31. Rawls, J. (1971). *A theory of justice*. Harvard University Press.

32. Remi-Aworemi, F. O. (2023). Gender disparities in digital literacy and education: A

case study of young girls in Northwest Nigeria. *IRE Journals*, 7(6), 45–52.

33. Suleiman, M. S. (2023). Bridging the digital gender divide for peace and development in Nigeria: Challenges, policies, and collaborative solutions for sustainable peace. *International Journal of Peace, Education and Development*, 11(2), 53–57. <https://doi.org/10.30954/2454-9525.02.2023.2>

34. United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development*.

35. Van Dijk, J. (2005). *The deepening divide: Inequality in the information society*. Sage Publications.

36. World Bank. (2021). *Global Findex Database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19*.

37. Zakaria, F. (2025). *Empowering women in Africa through digital payments*. Centre for International Governance Innovation.

<https://www.cigionline.org/publications/empowering-women-in-africa-through-digital-payments/>

Received: Feb 20, 2026

Accepted: Mar 16, 2026

Published: Apr 10, 2026

Bridging the Digital Gender Divide: FinTech Innovation as a Catalyst for Women's Educational Development, Economic Empowerment and Social Justice, authored by Blessing Agbo Ntamu and Delight Omoji Idika, is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (CC BY-NC-ND 4.0) Published by ICERT.