

**TECH HER: DIGITAL FINANCIAL INCLUSION FOR APIAPUM WOMEN IN  
OBUBRA LOCAL GOVERNMENT AREA, NIGERIA 2020-2025**

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**Abstract**

Digital financial inclusion is crucial for empowering women in rural Nigeria, particularly in underserved communities where it enables access to payments, savings, and credit via mobile technologies, fostering economic independence and reducing gender disparities amid post-COVID cashless policies. Despite national progress and the surge in cashless transactions, a significant research gap remains in examining age-specific experiences of women in rural settings. This paper investigates digital financial inclusion among Apiapum women across three age groups to identify disparities, challenges, and opportunities, using Apiapum as a case study reflective of broader rural Nigerian contexts. The paper employs a qualitative generational feminist narrative methodology. Primary data were analysed using synthesised responses from 10 women's representatives in the age groups 10-29 years, 30-59 years, and 60-70 years. Secondary data were drawn from broader Nigerian studies on women's fintech adoption, as well as articles and books. The paper is grounded in the Digital Agency Theory of Financial Inclusion, which examines how digital tools act as agents to delegate financial access, particularly in contexts of exclusion. Findings reveal uneven progress: youth exhibit emerging interest; working-age women actively use mobile platforms for business and remittances; and older women show minimal engagement due to low literacy, preferring cash despite policy pushes, with hindrances for all. The conclusion of the paper underscores the need for targeted interventions, including digital literacy training and improved rural connectivity, to bridge gaps and promote inclusive growth under Nigeria's National Financial Inclusion Strategy, ultimately enhancing Apiapum's women's participation in the digital economy.

**Keywords:** *Apiapum women, Generational feminist narratives, Digital financial literacy, Digital agency theory*

## Introduction

Digital financial inclusion refers to the use of digital technologies, such as mobile phones and internet-based services, to provide affordable and accessible formal financial services to underserved and excluded populations, enabling them to engage in payments, savings, credit, and other financial activities without relying on traditional banking infrastructure.<sup>1</sup> This approach leverages cost-saving digital tools to bridge gaps in financial access, particularly in developing regions where physical bank branches are limited and communities are far-flung. Building on this foundation, digital financial inclusion has emerged as a transformative force in global economies, particularly amid rapid technological advancements and shifting demographic needs.

At its centre, it democratises finance by reducing barriers such as geographic distance, high transaction costs, and bureaucratic hurdles in conventional banking. For instance, mobile money platforms allow users in remote villages to receive remittances, pay bills, or access microloans instantly via simple SMS or app interfaces, fostering economic participation among the unbanked. According to estimates, over 1.7 billion adults worldwide remain unbanked, with a significant portion in sub-Saharan Africa and South Asia, where digital solutions have proven particularly effective in integrating these groups into the formal economy.<sup>2</sup>

One of the primary benefits of digital financial inclusion is its role in alleviating poverty and empowering individuals. By enabling seamless access to savings and credit, individuals can build financial resilience against shocks such as health emergencies or crop failures. Women, who often face disproportionate exclusion from traditional finance due to cultural

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<sup>1</sup>World Bank Group, Digital Financial Inclusion  
<https://www.worldbank.org/en/topic/financialinclusion/publication/digital-financial-inclusion>. Accessed 05/08/2024.

<sup>2</sup>World Bank, Digital Financial Inclusion.

norms or a lack of collateral, benefit immensely since digital tools provide them with private accounts and transaction histories that enhance their bargaining power within households and communities.<sup>3</sup> In Kenya, for example, the Mpesa system, launched in 2007, revolutionised financial services by allowing users to transfer money via mobile phones, leading to a 22% increase in per capita consumption among participating households and lifting nearly 2% of the population out of poverty within a few years.<sup>4</sup>

The COVID-19 lockdown significantly accelerated the adoption of digital financial services in Nigeria. During the pandemic, restrictions on movement and physical interactions led to a surge in online transactions and mobile money usage, as people turned to digital platforms for essential financial activities to avoid contagion risks.<sup>5</sup> This surge was especially outstanding in Nigeria, where over 40 million adults remained unbanked before the crisis. Although Digital Financial Service transactions initially dipped in April 2020 due to stringent lockdowns, they rebounded strongly, reaching \$116 billion in the third quarter of 2020, up from \$77 billion in the second quarter.<sup>6</sup>

This growth was fueled by increased consumer trust in digital platforms, particularly in urban centres like Lagos and Abuja, where cashless policies were already in place.<sup>7</sup> The surge in e-commerce, which grew more than tenfold since 2017, played a pivotal role, with platforms such as Flutterwave and OPay facilitating seamless payments and remittances.

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<sup>3</sup>Global Partnership for Financial Inclusion, “Advancing Women’s Digital Financial Inclusion,” July 2020 Report prepared for the G20 Global Partnership for Financial Inclusion by the Better Than Cash Alliance, Women’s World Banking, and the World Bank Group, G20 Saudi Arabia (July, 2020),12-13.

<sup>4</sup>Tavneet Suri and Jack William. “The Long-Run Poverty and Gender Impacts of Mobile Money.” *American Association for the Advancement of Science*, vol. 354, no. 6317, 9 Dec. (2016),1288–92. <https://doi.org/10.1126/science.aah5309>. Accessed 05/08/2024.

<sup>5</sup>Stella Ngozi Okoroafora. “Impact of COVID-19 on Digital Financial Inclusion in Nigeria: A Study of Imo State in the South-East Geo-Political Zone.” *Journal of Academic Finance (JoAF)* vol. 15. Special Issue (2024), 121 <https://www.scientific-society.com/index.php/AF/article/download/699/333/3345>. Accessed 05/08/2025.

<sup>6</sup>Abayomi Oluwaseun Odumosu and Kokoévi Sossouvi, “Building Resilience Through Digital Financial Services: Africa COVID-19 Digital Finance Market Impact Series,” Nigeria. International Financial Corporation, (May, 2021), 2-3 Accessed 13 November, 2025 [www.ifc.org/content/dam/ifc/doc/mgrt/nigeria-building-resilience-through-dfs.pdf](http://www.ifc.org/content/dam/ifc/doc/mgrt/nigeria-building-resilience-through-dfs.pdf). Accessed 05/08/2024.

<sup>7</sup>Abayomi Oluwaseun Odumosu and Kokoévi Sossouvi, 2.

Moreover, internet subscribers rose by 2.5 million during the period, driven by remote work and education needs, further embedding digital habits into daily life.<sup>8</sup> Particularly noteworthy was the impact on marginalised groups, including low-income women entrepreneurs who traditionally operated in open markets. Facing income losses from market closures, many adopted smartphones and social media tools like WhatsApp and Facebook to market products, process orders, and handle payments remotely, bypassing physical banking halls.<sup>9</sup>

This shift not only sustained their businesses but also projected Nigeria's e-commerce spending toward \$75 billion by 2025, bolstered by population growth and mobile penetration. Government initiatives, such as digital aid distributions, amplified this trend, reaching vulnerable populations through mobile money agents who adapted safety protocols, such as social distancing.<sup>10</sup> However, the adoption was uneven, exacerbating existing inequalities. Rural areas, comprising 64% of Nigeria's population, faced barriers such as poor broadband connectivity and unreliable electricity, limiting access to Digital Financial Services.<sup>11</sup>

The post-COVID era saw the Nigerian government reinforce cashless policies through the Central Bank of Nigeria (CBN), aiming to reduce cash dependency, promote mobile services, and foster financial inclusion.<sup>12</sup> These policies, including limits on cash withdrawals and incentives for digital payments, resulted in a substantial rise in cashless transactions, reaching N395.47 trillion in 2022, a 42% increase driven by the lingering effects of the

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<sup>8</sup>Abayomi Oluwaseun Odumosu and Kokoévi Sossouvi, 2

<sup>9</sup>Jennifer Iwueze, Covid-19, Digital Financial Services, Nigeria. COVID-19 Unlocks e-Commerce and Digital Finance among Low-Income Women in Nigeria. Women's World Banking (January 14, 2021), para 3-4 [www.womensworldbanking.org/insights/covid-19-unlocks-e-commerce-digital-finance-among-low-income-women-in-nigeria/](https://www.womensworldbanking.org/insights/covid-19-unlocks-e-commerce-digital-finance-among-low-income-women-in-nigeria/). accessed 05/08/2024.

<sup>10</sup>National Information Technology Development Agency (NITDA). National Digital Economy Policy and Strategy (2020–2030). NITDA, (2020), 12, <https://nitda.gov.ng/wp-content/uploads/2020/06/National-Digital-Economy-Policy-and-Strategy.pdf>. Accessed 05/08/2024.

<sup>11</sup>Abayomi Oluwaseun Odumosu and Kokoévi Sossouvi “Building Resilience”, 3-4

<sup>12</sup>Stella Ngozi Okoroafor, “Impact of COVID-19”, 125

pandemic and regulatory pushes.<sup>13</sup> By promoting a cashless ecosystem, the policy aimed to enhance monetary control, reduce currency counterfeiting, and boost financial inclusion among the unbanked. However, its implementation triggered widespread cash shortages and scarcity, which disproportionately affected the informal sector, which accounts for 65% of GDP and 93% of employment, where 90% of transactions remain cash-based, leading to estimated economic losses of 20 trillion naira (\$40 billion) due to disrupted business operations.<sup>14</sup>

Economic ramifications extended beyond immediate shortages, with sectors like agriculture and poultry suffering severely, with the latter reporting 30 billion naira in losses from unsold eggs alone. The policy's push for digital adoption faltered due to inadequate infrastructure, with network failures overwhelming mobile apps and USSD platforms during the surge in transactions. Public trust eroded further, as 51% of respondents in surveys reported experiencing digital fraud during the pandemic, deterring uptake of tools like the Central Bank eNaira, which saw only 0.5% adoption by late 2022 and a minted value of just 3 billion naira (0.09% of cash supply).<sup>15</sup>

In rural areas, where financial inclusion stands at a mere 34% compared to 66% in urban zones, barriers were amplified by limited access to financial access points (only 38% availability), poor internet connectivity, and low digital literacy, making online note-swapping portals inaccessible to many unbanked residents.<sup>16</sup> There was also a lack of awareness, as the policy's financial inclusion goals are undermined by reduced savings incentives and access

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<sup>13</sup>Nigeria Inter Bank Settlement System, "Cashless Transactions Rise to 395TN" para 3. <https://nibss-plc.com.ng/cashless-transaction-rise-to-n395tn>. Accessed 05/08/2024.

<sup>14</sup>Ebelechukwu Monye. "Why Nigeria's Controversial Naira Redesign Policy Hasn't Met Its Objectives." Carnegie Endowment for International Peace, (January 18, 2024),1-3. [https://carnegie-production-assets.s3.amazonaws.com/static/files/Monye\\_Nigeria\\_FINAL.pdf](https://carnegie-production-assets.s3.amazonaws.com/static/files/Monye_Nigeria_FINAL.pdf). Accessed 12/08/2024.

<sup>15</sup>Ebelechukwu Monye, 3-5

<sup>16</sup>Ebelechukwu Monye, 3

disparities.<sup>17</sup> Women and youth, particularly in rural areas, who constitute a large portion of the financially excluded, encountered additional hurdles, including low digital literacy and a lack of affordable devices. Other challenges include infrastructure limitations, such as the unavailability of cashless payment terminals, mobile telephone networks, and mobile phones.<sup>18</sup>

This paper explores digital financial inclusion among women in Apiapum, a community in the Obubra Local Government Area of Cross River State, Nigeria. Apiapum women, as used in the paper, refers to women who live in Apiapum and are not necessarily indigenous, since, like many other communities, Apiapum has embraced settler elements from across the country and beyond. Apiapum women are used as the case study to reflect broader challenges and opportunities for women in most rural and underserved communities across the country. The paper relies on generational feminist narratives or intergenerational oral histories as the research methodology, focusing on gathering stories and using lived experiences and personal accounts from women across different age groups to explore marginalised women's voices within traditionally male-dominated research paradigms. Each woman's experience with digital financial platforms is documented in the paper to reflect the diversity of women's experiences. This recognition of diversity among women is another of the generally accepted characteristics of feminist research.

Data collection was conducted through oral interviews to balance guided questions with open-ended storytelling, which allows individuals a free hand to discuss issues without being boxed in, and through focus groups within each age range to encourage collective reflection

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<sup>17</sup>Mbabie, Francis Chigozie, Aigbedion, I. Marvelous, & Ezie Obumneke. "Impact of Cashless Policy Intensity on Economic Growth in Nigeria: 2009q1-2022q4" *International Journal of Innovative Research in Education, Technology & Social Strategies*, Volume 11, Number 1 (August, 2024),12-15  
<https://internationalpolicybrief.org/wp-content/uploads/2024/10/ARTICLE-8-2.pdf8b1b10>. Accessed 12/08/2024.

<sup>18</sup>Chioma G. Nkechi, Digital Financial Services and Financial Inclusion In Nigeria: Milestones and New Directions, *Economic and Financial Review* Central Bank of Nigeria, Volume 60/40, December (2022),152-153  
<https://www.cbn.gov.ng/Out/2024/RSD/Digital%20Financial%20Services%20and%20Financial%20Inclusion%20in%20Nigeria,%20Milestones%20and%20New%20Direction.pdf>. Accessed 12/08/2024.

and shared experiences. By examining women's experiences across three age brackets of 10-29 (youths), 30-59 (working-age adults), and 60-70 (elderly), the paper highlights disparities, connections, and differences across age groups. The scope is limited to women in Apiapum, Obubra Local Government Area, Cross River State, Nigeria. Still, it draws analysis on general trends in Nigerian women's financial inclusion, where gender gaps persist, with only 47% of women accessing formal services in 2023 compared to higher rates for men.<sup>19</sup>

### **Theoretical Framework**

Theoretically, this paper is grounded in the Digital Agency Theory of Financial Inclusion, which examines how digital tools act as agents to expand financial access, addressing problems such as information asymmetry and leveraging technology adoption to empower users, particularly in contexts of exclusion.<sup>20</sup> This theory underscores the role of digital platforms in mitigating barriers faced by women in rural settings such as Apiapum. The origin of the Digital Agency Theory of Financial Inclusion can be traced back to the evolving discourse on financial inclusion in the early 21st century, particularly amid the rise of digital technologies in developing economies. The theory was formally proposed by economist Peterson K. Ozili in 2024, as part of his broader work on financial inclusion theories. Ozili's motivation stemmed from observing a "strong advocacy for a shift to a digital-led financial inclusion agenda."<sup>21</sup> promoted by institutions including the World Bank, the Bill and Melinda Gates Foundation, and the Alliance for Financial Inclusion.

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<sup>19</sup>Women's World Banking, Financial Inclusion in Nigeria: NGX Regulation Limited Case Study February 4, 2025 <https://www.womensworldbanking.org/insights/financial-inclusion-in-nigeria-ngx-regulation-limited-case-study/> Accessed 12/08/2024.

<sup>20</sup>Peterson K. K. Ozili, "Digital Agency Theory of Financial Inclusion: A Theory of Digital Financial Inclusion." In *Developing Digital Inclusion Through Globalization and Digitalization* edited by Elsadig Musa Ahmed and P.A. Hershey: IGI Global Scientific Publishing. (2024), 55-69. <https://doi.org/10.4018/979-8-3693-4111-7.ch004> Accessed 12/08/2024.

<sup>21</sup>Peterson Ozili "Digital Agency Theory" 56.

Historically, the theory builds on foundational economic concepts, notably the classic agency theory developed in the 1970s by Michael C. Jensen and William H. Meckling, which examines principal-agent relationships in which tasks are delegated with the expectation of aligned interests. Ozili extended this to the digital realm, framing digital tools and platforms (e.g., fintech firms, AI, and mobile money systems) as "agents" hired by "principals" such as governments or banks to deliver financial inclusion. Digital Agency Theory addresses these gaps by incorporating elements from the technology acceptance model (introduced in the 1980s and refined over decades) and the systems theory of financial inclusion, also by Ozili in 2020. It emerged in a post-COVID-19 era, in which the pandemic accelerated digital adoption globally, highlighting the digital determinants of inclusion, as seen in studies from regions such as Africa and Asia.<sup>22</sup>

The historical context includes the launch of initiatives such as Kenya's Mpesa in 2007, which demonstrated the potential of digital agents, and the G20's 2010 principles for innovative financial inclusion, which set the stage for digital-focused policies. Since its introduction in 2024, the theory has been disseminated through academic platforms like SSRN and MPRA, influencing discussions on digital financial inclusion in policy and research. It represents a pivotal evolution from analogue-centric inclusion models to ones embracing digital transformation, aligning with global trends toward sustainable development goals. Historicizing agency in a digital context provides a lens for analysing how technologies empower users in excluded settings, fostering welfare improvements amid rapid technological change.

### **Women and Digital Financial Inclusion in Nigeria: An Overview**

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<sup>22</sup>Peterson Ozili, "Digital Agency Theory", 60.

Overall, while COVID-19 spurred a slight uptick in digital usage, persistent challenges such as poor network coverage and cultural biases limit progress, mirroring issues in most Nigerian rural communities.<sup>23</sup> Post COVID-19 and the introduction of Nigeria's cashless policy show a gender gap in data on Nigerian women's digital financial inclusion, with only 13% of women using fintech, compared to higher male participation, exacerbated in rural areas by the digital divide.<sup>24</sup> So, post-COVID dynamics have introduced modest gains, with government palliatives distributed via mobile wallets encouraging initial trials among middle-aged groups. Yet the digital divide persists, with only 35% of Nigerian women using mobile internet apps, due to affordability and skills gaps, particularly in rural settings, where women's literacy is just 34%.<sup>25</sup> Cultural biases, including patriarchal controls over household finances, deter women from seeking training, as seen in surveys where rural women cite family disapproval as a barrier.<sup>26</sup>

In Nigeria, women comprise less than 35% of active mobile banking users, with rural exclusion rates at 35% for women versus 25% for men in Sub-Saharan Africa.<sup>27</sup> For rural women, this translates to fragmented adoption, where fintech access scores average around 3.89 out of 5. Still, qualitative hurdles, such as network unreliability and trust issues

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<sup>23</sup>Central Bank of Nigeria, *Framework for Advancing Women's Financial Inclusion in Nigeria* (December 2019), 13-15

<https://www.cbn.gov.ng/search.html?q=Framework+for+advancing+women%27s+financial+inclusion>. Accessed 12/08/2024.

<sup>24</sup>Adekemi Omotubora "AI for Women's Financial Inclusion—Analysis of Product Design and Policy Approaches in Nigeria" *Data & Policy*. (2024);6:e66-5. <https://www.cambridge.org/core/services/aop-cambridge-core/content/view/318A5E8D230F680E49E3DD522FB2CFFC/S2632324924000622a.pdf/ai-for-womens-financial-inclusionanalysis-of-product-design-and-policy-approaches-in-nigeria.pdf.70fc10>

<sup>25</sup>Financial Alliance for Women, "Towards Women's Financial Inclusion: A Gender Data Diagnostic of Nigeria", Prepared for the WFID Partnership (2022), 14. [https://data2x.org/wp-content/uploads/2022/06/06.21\\_DataDiagnostics-Nigeria.pdf](https://data2x.org/wp-content/uploads/2022/06/06.21_DataDiagnostics-Nigeria.pdf). accessed 12/08/2024.

<sup>26</sup>United States Agency for International Development, "Understanding the Gender Digital Divide in Nigeria", *Learning Brief* May (2023), 2.

<sup>27</sup>Magdalene Atabat, Kalu M. Onu, and Mercy Ijadusi "Empowering Women Through Fintech: Gender and Financial Inclusion in Nigeria" *IRE Journals* Volume 9 Issue 4 | ISSN: 2456-8880 (October 2025), 1253 <https://www.irejournals.com/formatedpaper/1711420.pdf>. Accessed 12/08/2024.

exacerbated by poor infrastructure, undermine progress.<sup>28</sup> National surveys reveal that while Nigeria's overall financial inclusion rate has improved to 64% by 2022, rural women lag significantly, with only about 51% having formal accounts, often due to requirements such as national identification numbers (NINs) that are harder to obtain in remote areas.<sup>29</sup>

Broader national analyses paint a similar picture, emphasising the rural-urban divide. In rural Nigeria, where 61% of adult women reside, over 16 million depend solely on informal mechanisms like savings groups, contributing small weekly amounts but lacking the security and scalability of formal systems. Key obstacles include irregular incomes below \$1.8 per day, mobility constraints due to childcare duties, and inadequate digital infrastructure, with only 32% owning smartphones despite 88% having basic mobile phones. Identity documentation gaps, particularly in northern regions but applicable southward, widen the gender disparity, with a 10% gap in NIN enrollment. Trust issues arise from agent fraud and unethical lending apps, eroding confidence in digital platforms. Limited education further compounds this, as many women lack the literacy to navigate app-based services or understand financial terms, leading to a cycle of exclusion. This disparity is stark in rural areas, where informal mechanisms like village savings groups serve 2.6 million women. Still, digital transitions lag due to mobility constraints and a lack of national IDs, affecting 58% of women.<sup>30</sup> To bridge this, recommendations focus on digitising social grants into mobile wallets, expanding female-led agent networks to increase proximity and relatability, and using alternative data for credit scoring to include those without traditional credit histories.<sup>31</sup>

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<sup>28</sup>Magdalene A. Atabat, Kaba M. Onu, and Mercy Ijadusi, 1255.

<sup>29</sup>Financial Alliance for Women, "Towards Women's Financial Inclusion," 12-14.

<sup>30</sup>Central Bank of Nigeria, "Situation Analysis of Women's Financial Inclusion in Nigeria," Central Bank of Nigeria Gender Centr of Excellence (April 2023), 20,25-27.

<sup>31</sup>Central Bank of Nigeria, "Framework for Advancing Women's Financial Inclusion in Nigeria," 34.  
[https://www.cbn.gov.ng/out/2020/dfd/framework%20for%20advancing%20women%27s%20financial%20inclusion%20in%20nigeria\\_final\\_5mb.pdf](https://www.cbn.gov.ng/out/2020/dfd/framework%20for%20advancing%20women%27s%20financial%20inclusion%20in%20nigeria_final_5mb.pdf) . accessed 12/08/2024.

## **Apiapum Women under the Digital Financial Lens**

In Apiapum, as in many rural enclaves of Cross River State, the landscape of financial access is marked by sparse banking infrastructure, with residents often travelling about 11km to the First Bank of Nigeria, the only bank in the Local Government Area. This geographical isolation has exacerbated cash dependency, where daily transactions for agriculture, petty trading, and household needs rely heavily on physical currency. For these women, who predominantly work in informal sectors such as farming and market vending, these challenges are intensified by societal expectations that prioritise domestic roles alongside economic autonomy.<sup>32</sup> Women in Apiapum are faring unevenly in terms of digital financial inclusion, with adoption rates influenced heavily by age, education, and socioeconomic status. To provide insights, the next three sections analysed and synthesised responses to questions related to digital inclusion and digital financial inclusion, based on stories and experiences segmented by age.

### **Age Group 10-29 years**

In Apiapum, girls aged 10-29 are mostly students, apprentices, and caregivers who show emerging interest in mobile payments, but their access to mobile devices varies. The five students interviewed showed different levels of exposure to digital financial inclusion. Enangha Apeh in Junior Secondary School (JSS) 2 noted that "my teachers talk about online banking, but I only use phones for games. My parents say it's not for kids."<sup>33</sup> Indicating parental and cultural restrictions and contributing to low early adoption despite the potential for educational fintech tools. On the other hand, Hope Okpechi in Senior Secondary School (SSS) 1 excitedly acknowledged that "I saw ads for savings apps on YouTube, but without my own SIM card, I

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<sup>32</sup>Mercy Irek, 44 years, Farmer/Petty Trader, Apiapum, interviewed 06/08/2024.

<sup>33</sup>Enangha Apeh, 12-years. Community Secondary School, Apiapum, interviewed 7/08/ 2024.

can't sign up. It's exciting, though, when I am older and can make my own money."<sup>34</sup> Hope's response highlights age-related restrictions and a lack of personal devices, contributing to delayed entry into digital financial services despite media awareness.

"I borrow my sister's phone to check school updates on WhatsApp, but for money, I only know about sending airtime; data costs too much for anything else."<sup>35</sup> The responses of Favour Abeng Senior Secondary School (SSS) 2 students illustrate limited exposure to formal digital finance, focusing on basic communication tools, which is typical of most other young girls in Apiapum, where economic constraints restrict broader adoption. Aisha Danjuma in Senior Secondary School (SSS) 2 informed the researcher that "I use my mom's phone sometimes to send money via USSD codes for school fees, but I don't have my own account. It's fun, but the internet is slow in Apiapum, and I worry about mistakes."<sup>36</sup> This reflects emerging awareness but limited ownership, a common pattern among young rural girls, where mobile penetration is 75% but gender gaps persist. Ezinne Amadi is about to write the university matriculation examinations and, in her words, "I have been using email for Joint Admission and Matriculation Board examination and West African Examination Council examination-related demands as well as WhatsApp for group contributions regularly. But I have not yet ventured into the bank app. I look forward to this as I get admission into a higher institution."<sup>37</sup> This points to informal digital uses transitioning to formal ones, reflecting the youth's greater potential for inclusion with training.

The responses from the next two girls highlight improved relationships between madams and their caregivers. This is worth noting, since many caregivers do not enjoy being fully absorbed into the families they work for. Joy Irom notes that "My madam teaches her

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<sup>34</sup>Hope Okpechi, 13-years, Christian Secondary School, Apiapum, interviewed 8/08/2024.

<sup>35</sup>Favour Abeng, 14-years, Technical Secondary School, Apiapum, interviewed 9/08/2024.

<sup>36</sup>Aisha Danjuma, 15 years, Technical Secondary School, Apiapum, interviewed 9/08/2024

<sup>37</sup>Ezinne Amadi, 19 years, JAMB Candidate, Apiapum, interviewed 8/08/2024.

children and me games and other applications on her phone, but money apps, she says, 'na adult stuff. " I want to try saving money to trade in toys online someday."<sup>38</sup> This reflects early-stage interest limited by perceptions of maturity, emphasising the need for age-appropriate digital education in underserved communities like Apiapum. Dorcas Ochiagha observed, "I saved little money on a piggy bank app once, but network issues made me stop. It's better than hiding cash."<sup>39</sup> Dorothy shows tentative engagement with savings platforms, but infrastructure hinders sustainability, another widespread issue in Apiapum.

The last set of responses in this section are those of apprentices who are learning various skills in the hope of getting established soon. For Gloria Ayo, "I do have an Android phone, and it was my friend who showed me how to use apps like Palm Pay for fund transfers, but my parents think it's risky and take the phone away at night."<sup>40</sup> This demonstrates peer influence on tech curiosity, yet familial oversight creates hurdles, mirroring broader patterns of controlled access among rural youth. Blessing Mbina heard of apps like Opay from friends when she was still in school. Although she has an Android phone, after leaving school, she can't afford data because, as an apprentice, she isn't paid. She prefers cash for going to the market since it serves her better in the village market."<sup>41</sup> Analysing Blessing's opinion highlights affordability barriers, which align with data showing that young women in rural areas are less likely to use mobile money due to costs. On the other hand, Ivy Etaba notes that "I use USSD for quick transfers to buy materials, but bad network drops calls often. It's handy for small things,"<sup>42</sup> shows practical but inconsistent use due to infrastructure issues, aligning with trends where young women experiment with basic tools before advancing to apps.

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<sup>38</sup>Joy Irom, 11 years, Caregiver, Apiapum, interviewed, 10/08/202.

<sup>39</sup>Dorcas Ochiagha, 16 years, Community Secondary School, Apiapum, Interviewed 7/08/2024.

<sup>40</sup>Gloria Ayo, 17 years, Hair Salon Apprentice, Apiapum, Interviewed 6/08/2024.

<sup>41</sup>Blessing Mbina, 18 years, Couture Apprentice, Apiapum, Interview 6/08/202.

<sup>42</sup>Ivy Etaba, 20 years, Interior Decoration Apprentice, Apiapum, Interview 6/08/2024.

### Age Group 30-59 years

These are working-age women who are farmers, traders, shop owners, vendors and artisans who balance family life and their businesses, and they mostly exhibit moderate use in mid-life for economic needs. Two respondents were selected from the above-mentioned professions to provide a more comprehensive understanding of how women in this age bracket have accessed and used digital financial spaces. Mrs Linda Mbina and Elder Grace Abeng are both civil servants, but for this research, they preferred to be addressed as farmers, since that is the profession that has introduced them to the digital financial space. For Mrs Linda, receiving a small loan via an app to buy seeds boosted her harvest, but repaying it was difficult because the signal failed, especially during the rainy season.<sup>43</sup> This indicates empowerment through access to credit, but seasonal connectivity challenges underscore persistent rural infrastructure gaps in agricultural contexts. Elder Grace opened a mobile money account for loans, but the poor signal has made it unreliable. Still, she “prefers the mobile money account to money lenders.”<sup>44</sup> Her experience reflects improvements in credit access, but rural connectivity issues persist, underscoring barriers to agricultural digital inclusion.

For Kate Adomi, who trades in household wares, mobile money helps her pay suppliers without travelling to Aba and Onitsha, especially after COVID. Still, high transaction fees eat into my profits.<sup>45</sup> This emphasises efficiency gains from digital tools in commerce, while noting cost barriers that disproportionately affect women-led small businesses in rural economies. Fatima Ebak is a trader who uses mobile banking for receiving payments from customers outside Apiapum. For her, it saves time during and after the lockdowns, but the fees

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<sup>43</sup>Linda Abeng, 40 years, Civil Servant/Farmer, Apiapum, interviewed 6/08/2024.

<sup>44</sup>Grace Abeng, 42 years, Civil Servant/Farmer, Apiapum, Interviewed 6/08/2024.

<sup>45</sup>Faith Adomi, 32 years, Trader, Apiapum, Interviewed 10/08/2024.

are high.<sup>46</sup> Thus, demonstrating practical post-COVID benefits for women entrepreneurs, who earn more through digital tools, as seen in fintech initiatives like Trade Lenda.

Shop owners like Mrs Monica Okimba own retail shops and added Point Of Sale (POS) to their businesses to ease customer payments during the pandemic, and have continued using POS since it is faster, except when there is a network glitch. Her children taught her to avoid errors.<sup>47</sup> This reveals intergenerational learning as a pathway to adoption, with initial hesitancy yielding benefits in daily operations amid policy-driven cashless shifts. Madam Helen Okan, a shop owner, shares a different experience entirely. While acknowledging the help of digital payments during COVID, she now uses digital payment platforms cautiously for her business, having lost money to scammers once.<sup>48</sup> Her experience highlights fraud risks, which were noted as a key deterrent for most mid-aged women in Apiapum, despite an overall upsurge in transactions.

Eyangha Owujiba is a food vendor who transacts her business in cash due to fraud and receives family support from her children, who are away from her, through transfers. She acknowledges its convenience but has had to double-check every transaction because of fraud alerts.<sup>49</sup> Her case highlights the role of remittances in household stability, coupled with vigilance against scams, a common concern amplifying caution in digital engagements, not only in rural areas. Like Eyangha, Madam Janet Okafor, another food vendor, accesses digital financial platforms for remittances from children in cities, but prefers cash for daily trade transactions because she is not digitally literate.<sup>50</sup> Here we see its use for family support, but

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<sup>46</sup>Fatima Ebak, 35 years, Trader, Apiapum, Interview 10/08/2024.

<sup>47</sup>Monica Okimba, 37 years, Retailer/POS operator, Apiapum, interviewed 12/08/2024.

<sup>48</sup>Helen Okan, 38 years, Shop Owner, Apiapum, interviewed 12/08/2024.

<sup>49</sup>Eyangha Owujiba, 44 years, Food Vendor, Apiapum, interviewed 12/8/2024.

<sup>50</sup>Janet Okafor, 50 years, Food Vendor, Apiapum, 12/8/2024.

digital literacy gaps are limiting full engagement with her business, a pattern common among this age bracket.

Artisans like Ifeoma Ayami and Nkechi Ojong, both friends who are originally of the Igbo stock but married to Mbembe men who have settled in Apiapum, demonstrate an understanding of digital financial spaces. While Ifeoma, pushed by government policies, has saved on the Piggy Vest app, which has empowered her small soap-making business to expand<sup>51</sup> Thus, demonstrating positive adoption for savings through aligning with platforms targeting women for wealth-building, Nkechi, on the other hand, has relied on Apps like Kuda to track expenses for her handmade beauty accessories business. This has helped improve her budgeting, though she still keeps cash for emergencies.<sup>52</sup> Demonstrating enhanced financial management capabilities with a cautious approach reflecting lingering trust issues in switching fully to digital finance systems.

### **Age Group 60-70 years**

These age brackets are elderly, government retirees, and mostly homemakers with low-tech exposure. Although most respondents in this section share many commonalities regarding their knowledge of digital inclusion in general and digital financial inclusion in particular, the 10 responses are discussed here to highlight their peculiarities and avoid generalisations. Mrs Kemi Ebughe is a retiree who prefers cash, while her daughter handles digital stuff because she does not understand Android phones.<sup>53</sup> Relying on proxies due to low literacy, Madam Kemi's case reflects national trends where older women have minimal digital engagement. Mrs Ola Ebri prefers to use the only bank in Obubra because of network hitches she has experienced

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<sup>51</sup>Ifeoma Ayami, 45 years old, Artisan, Apiapum, Interviewed 12/8/2024.

<sup>52</sup>Nkechi Ojong, 48 years, Artisan, Apiapum, Interviewed, 12/8/2024.

<sup>53</sup>Kemi Ebughe, 62 years, Retiree, Apiapum, Interviewed 13/08/2024.

while trying to process her pension since she retired in 2023.<sup>54</sup> Her experience highlights how infrastructure dependency limits use and the rural-urban divide in access.

Mrs Pat Okey, a retiree, prefers cash because she forgets her PIN for the account her son opened for her. Depending on others to recall her PIN has resulted in financial loss.<sup>55</sup> Dependence on others for navigation and the risks involved illustrate some of the barriers that widen the digital divide for older rural women in particular. The likes of Mrs Lydia Irek, a homemaker, avoid digital financial platforms because of the complications of remembering PINs and passwords.<sup>56</sup> Barriers, especially memory issues, have hindered adoption, exacerbated by age-related challenges. Madam Mary Oyama and Madam Ngozi Ibi, although interviewed differently, expressed the same sentiments concerning digital financial apps. They are seemingly anti-digital, insisting that it is not meant for them and that cash is safer, since they have never experienced errors. Although government aid comes digitally, forcing them to learn the basics, they are content with their analogue lifestyle.<sup>57</sup> Their resistance to technology is generally rooted in tradition, aligning with data on low fintech uptake among older women.

Madam Queen Achigbe, assisted by neighbours, was able to access digital financial platforms because Government subsidies came via mobile during COVID. Since then, relying on her neighbours, she has continued to make efforts.<sup>58</sup> This respondent shows policy-induced exposure to digital services, yet complexity leads to indifference, underscoring the need for simplified interfaces for older adults. Poor eyesight has made it difficult for Madam Rose Okpa to use digital platforms, although she has heard about these apps on the radio. For her, First Bank, where she collects her pension, is more reliable.<sup>59</sup> This brings to the fore physical

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<sup>54</sup>Ola Ebri, 63 years, Pensioner, Apiapum, Interview 13/08/2024.

<sup>55</sup>Pat Okey, 61-year, Retiree, Apiapum, Interview 13/08/2024.

<sup>56</sup>Lydia Irek, 65-year, Homemaker, Apiapum, Interview 13/08/2024.

<sup>57</sup>Mary Oyama 70 years and Ngozi Ibi 71 years, Elderly, Apiapum, Interview 13/08/2024.;

<sup>58</sup>Queen Achigbe, 67 years, Apiapum, interviewed 13/08/2024.

<sup>59</sup>Rose Okpa, 69 years, Retiree, Apiapum, interviewed 13/08/2024.

limitations, such as vision impairment, as key obstacles, reinforcing preferences for traditional methods in low-tech environments.

To avoid failed signals and the stress that comes with them, widow and shop owner Mrs Sarah Ebokpo has decided to stick to what she knows, since her attempts to use a digital platform for market sales have always been met with network challenges.<sup>60</sup> This underscores the frustration caused by unreliable networks, contributing to aversion and perpetuating reliance on cash among seniors in remote areas. The last respondent in this section is Mrs Tina Etaba, who serves as an elder in her church, and has been undergoing lectures from her young neighbours. But she worries about mistakes that could lead to losing money, as has happened to some others, not necessarily in her age bracket. She has thought it wise to keep cash, which has served her well all these years.<sup>61</sup> Reflects openness to learning tempered by fears of financial risk, a sentiment common among elderly demographics who resist change without adequate support.

### **Analysing Responses from the Field**

The analysis from ages 10-29 reflects common patterns of higher adoption among youths due to tech familiarity. As can be observed, exposure to education often introduces basic digital concepts, yet only about 35% of people own smartphones capable of fintech apps, constrained by entry-level devices costing ₦20,000-50,000. Parental oversight, rooted in protective cultural norms, restricts independent usage, with many relying on shared family phones, limiting privacy for financial transactions. In contrast, responses from the 30-59 age bracket indicate moderate use for economic needs. These middle-aged women engage more actively and are typically involved in petty trading, small businesses, farming cooperatives, and remittances, thus leveraging platforms such as PiggyVest or HerVest that promote savings

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<sup>60</sup>Sarah Ebokpo, 68 years, Farmer, Apiapum, interviewed 13/08/2024.

<sup>61</sup>Tina Etaba, 66 years, Church Elder, Apiapum, interviewed 13/08/2024.

and credit for group savings schemes, which have seen uptake in Cross River State, offering low-barrier entry with minimal data requirements.

These women report improved business cash flows, reducing travel risks to distant banks.<sup>62</sup> However, adoption is hampered by intermittent power supply, with solar alternatives unaffordable for many earning below ₦30,000 monthly. Older women in Apiapum, on the other hand, epitomise resistance and deepest exclusion, due to barriers like illiteracy, with rates hovering around 20-30% in rural Cross River.<sup>63</sup> Because they struggle most, user interfaces can be intimidating. At the same time, fear of scams, amplified by community stories of fraudulent agents, reinforces a preference for cash, as formal systems demand unfamiliar verifications like BVN linkage. This outcome aligns with national trends, in which older demographics have minimal engagement.<sup>64</sup>

Nationally, this aligns with a persistent gender gap where women are 12 percentage points less likely to be financially included than men, with only 31% holding formal bank accounts versus 61% for men.<sup>65</sup> This disparity is stark in rural areas like Apiapum, where informal mechanisms such as village savings groups serve 2.6 million women. Still, digital transitions lag due to mobility constraints and the lack of national IDs, affecting 58% of women.<sup>66</sup> In Apiapum, although physical access to agents is not limited, most women still rely on informal esusu systems that offer social support but no interest or security, and on loan givers whose percentages can become burdensome when loans are not repaid on time.<sup>67</sup>

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<sup>62</sup>Ifeoma Ayami, 45 years old, Artisan, Apiapum, Interviewed 12/8/2024.

<sup>63</sup>Oluwafemi Samson Balogun, Ismaila Temitayo Sanusi, and Oluwaseun Alexander Dada, "The Impact of Age and Income in Using Mobile Banking Apps", *International Journal of E-Business Research*, vol. 18, Issue 1,(2022),13-14. <https://www.sciencedirect.com/org/science/article/pii/S1548113122000272?utm>. Accessed 12/08/2024.

<sup>64</sup>Oluwafemi Samson Balogun, Ismaila Temitayo Sanusi, and Oluwaseun Alexander Dada,

<sup>65</sup>Financial Alliance for Women, "Towards Women's Financial Inclusion,"12

<sup>66</sup>Financial Alliance for Women, 13.

<sup>67</sup>Edim Agwu Ngbongha 45 years and Awubi Okpa Ayami, 50 years, Civil Servants/Farmers, Apiapum, 06/08/2024.

Addressing the above outcomes, according to Apiapum women, will require targeted interventions, such as community-led digital literacy workshops in the three Mbembe dialects (Adun, Okum, and Osopong) and pidgin English, subsidised devices for low-income women, and expanded agent networks with female representatives to build trust.<sup>68</sup> Fintech firms could also adapt products to use voice-activated USSD for low-literacy users, bypassing app complexity.<sup>69</sup> Policy-wise, integrating gender data into CBN frameworks could prioritise rural outreach, aiming to close the 12% gap by 2030. Success in similar communities like Ubetim in Akwa Ibom State,<sup>70</sup> Kukum-Daji Community and Kaura LGA both in Kaduna,<sup>71</sup> shows that when barriers fall, women's empowerment surges, boosting household incomes by 20-30% through improved access to savings and credit.<sup>72</sup> In Apiapum, fostering inclusive ecosystems could transform uneven adoption into equitable participation, aligning with national goals for sustainable development and reducing poverty cycles entrenched in rural gender disparities.<sup>73</sup>

This is because Apiapum represents a typical rural community where financial inclusion remains challenging due to limited infrastructure, low literacy rates, and traditional reliance on cash-based economies. Women in such areas often face compounded barriers, including gender norms, limited digital skills, and unequal access to mobile technology, which

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<sup>68</sup>Edim Agwu Ngbongha 45 years and Awubi Okpa Ayami, 50 years,

<sup>69</sup>Techerfrica, Helping To Bridge the Digital Divide in Nigeria Para 8 <https://www.techherfrica.org/tech-herfrica-helping-to-bridge-the-digital-divide-in-nigeria/> Accessed 15/09/2024.

<sup>70</sup>Techherfrica A Comprehensive Report on Digital and Financial Literacy Training for Women Entrepreneurs in Ubetim village, Akwa Ibom State, Nigeria <https://www.techherfrica.org/a-comprehensive-report-on-digital-and-financial-literacy-training-for-women-entrepreneurs-in-ubetim-village-akwa-ibom-state-nigeria/> Accessed 15/09/2024.

<sup>71</sup>Techherfrica, Annual Impact Report: Explore our annual Transformational Stories, lessons Learned, and Impact Achieved, <https://www.techherfrica.org/impact-report/> Accessed 15/08/2024.

<sup>72</sup>Techerfrica, Helping To Bridge the Digital Divide in Nigeria Para 8 <https://www.techherfrica.org/tech-herfrica-helping-to-bridge-the-digital-divide-in-nigeria/> Accessed 16/09/2024.

<sup>73</sup>Oladipupo Fasawe, Christiana Onyinyechi Okpokwu, Akindamola Samuel Akinola "Deployment Framework for Digital Inclusion and Financial Access in Underserved Communities" *IRE Journal* vol. 2 Issue 11 ISSN: 2456-8880 IRE 1711038 (2019), 636-637 <https://www.irejournals.com/formatedpaper/1711038.pdf> . accessed 15/09/2024.

hinder their participation in digital financial services.<sup>74</sup> Despite national progress in digital finance, with initiatives like mobile money accounts and fintech platforms targeting women, rural communities like Apiapum lag behind, reflecting broader disparities in Nigeria where women's financial exclusion stands at 36%, driven by factors such as income, education, and trust in financial providers.<sup>75</sup>

Efforts to address these gaps have included government-led programs and partnerships with microfinance institutions, which have shown promise in empowering women through accessible credit.<sup>76</sup> In Cross River State, studies demonstrate that microcredit finance positively influences women's empowerment by providing capital for small businesses, enhancing decision-making power within households and fostering community networks.<sup>77</sup> For instance, targeted loans enable women to invest in agricultural inputs or expand trading activities, leading to increased income and self-reliance. A survey of married women in the state highlighted this impact, underscoring the need for gender-sensitive microfinance policies to amplify these benefits.<sup>78</sup> However, barriers persist, including high interest rates, collateral requirements, and cultural biases that view women as higher-risk borrowers, which limit uptake.

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<sup>74</sup>Central Bank Situational Analysis of Women's Financial Inclusion in Nigeria CBN Gender Center of Excellence April, (2023), 53-68 [www.cbn.gov.ng](http://www.cbn.gov.ng), accessed 15/09/2024.

<sup>75</sup>Central Bank of Nigeria and Enhancing Financial Innovation & Access "Women's Financial Inclusion in Nigeria" Fena December (2019), 3,10-11

<https://www.efina.org.ng/wp-content/uploads/2020/01/20200113-WEB.pdf>, Accessed 15/09/2024,

<sup>76</sup>Nnana Okoi Ofem and Nwadike Ngozi Christiana, "Appraisal of Impact and Utilization of Woman Empowerment Programmes on Poverty Alleviation in the Central Senatorial District of Cross River State, Nigeria" *Wukari International Studies Journal*, vol 8 (6), September (2024), 127-128, 136, 139-141

<https://wissjournals.com.ng/index.php/wiss/article/download/453/415/453> Accessed 15/10/2024.

<sup>77</sup>Festus Nkpoyen and Godfrey E. Bassey "Micro-lending as an Empowerment Strategy for Poverty Alleviation among Women in Yala Local Government Area of Cross River State, Nigeria." *International Journal of Business and Social Science*, vol. 3 No. 18; Special Issue September (2012), 234-240

<sup>78</sup>Helen. Walter Mboto, T.S Manyo, N.S Ekpo, & E.O. Asuquo, "Effect of Micro Credit Finance on Women Empowerment in Cross River State." *Wukari International Studies Journal*, 7(1), 8. (2023),8  
<https://wissjournals.com.ng/index.php/wiss/article/view/117> Accessed 15/09/2024.

Moving forward, empowering women in Apiapum requires multifaceted interventions. Public education campaigns, such as those belatedly rolled out by the National Orientation Agency in January 2023, are being implemented across 774 local governments.<sup>79</sup> Community-based financial literacy programs, tailored to low-literacy audiences through local languages and demonstrations, could demystify digital tools. Partnerships between the Central Bank of Nigeria (CBN) and telecom providers might invest in rural connectivity, reducing data costs and network failures that deter adoption. Moreover, incentivising female entrepreneurship in Apiapum via grants and training aligns with the Sustainable Development Goals, particularly Goal 1, to end poverty in all its forms and potentially lift households out of poverty.

This is because success stories from similar rural settings like Cross River State Micro-lending cooperatives, which empower women in small enterprises, thereby boosting income, education, and health, Women for Women International's Stronger Women in Osomba, Ekong Anaku and Mfamosin communities in Akamkpa LGA of Cross River State, show that when women gain financial access, community resilience improves, with ripple effects on education and health.<sup>80</sup> Yet without addressing underlying gender norms through advocacy and male involvement, progress will remain uneven. Ultimately, for villages like Apiapum, true inclusion demands not just technology but also equitable policies that recognise women's pivotal economic roles, fostering a shift from exclusion to empowerment across Nigeria's diverse rural tapestry.

## **Conclusion**

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<sup>79</sup>Ebelechukwu Monye. "Why Nigeria's Controversial Naira Redesign Policy Hasn't Met Its Objectives," 5.

<sup>80</sup>Women for Women International, Stronger Women, Stronger Nation Programs, Focus Group Discussions in Osomba, Ekong Anaku, and Mfamosin communities in Akamkpa LGA, Cross River State, 3-5 July 2025.

The paper seeks to highlight the importance of digital financial inclusion for women in Apiapum, especially in light of the Federal Government of Nigeria's pursuit of a cashless society. To demonstrate this, women within three age brackets, 10-29, 30-59 and 60-70, were interviewed about their familiarity and use of digital financial platforms. What was obvious from the responses was that the COVID-19 experience underscores digital financial inclusion as a catalyst for financial inclusion, but realising its full potential requires concerted efforts to bridge the digital divide and foster trust in emerging technologies. However, the path to widespread digital inclusion for Apiapum women is not without challenges, as the paper has demonstrated. These challenges, which exacerbate the persistent digital divide, include limited internet connectivity, affordable devices, and digital literacy, which have hindered adoption in Apiapum.

To mitigate these hurdles, enhanced public education campaigns should promote financial literacy programs targeted at underserved demographics. Investments in rural broadband, affordable devices, and agent banking networks are crucial to bridge the urban-rural divide, where adults with nearby financial access points are 21 percentage points more likely to be banked. Additionally, strengthening cybersecurity measures and regulatory frameworks could help rebuild trust, addressing perceptions of fraud that hinder adoption. Looking forward, Nigeria's digital financial landscape must address these challenges to ensure inclusive growth. Initiatives like unified credit scoring using transactional data could extend services to those without formal credit histories, while bundling low-value products like savings and rewards could attract the unbanked.

Empowering women in Apiapum with tech knowledge and skills is essential to integrating them into Nigeria's evolving digital financial space. Initiatives such as digital literacy training, gender-sensitive fintech products, and infrastructure investments can bridge

age-based gaps, fostering economic independence and benefiting most communities. By prioritising women's digital inclusion through policies such as the National Financial Inclusion Strategy, Nigeria can unlock sustainable growth and ensure no woman is left behind in the cashless era.