



Women's World Banking

REACHING RURAL WOMEN: CATALYZING FINANCIAL INCLUSION AT THE EDGE OF FINANCE



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April 2024

“

**Because there's nothing micro
about a billion women. ”**

Mary Ellen Iskenderian

Author, Advocate, President and
CEO of Women's World Banking

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Executive Summary

This study highlights the need for collaborative efforts aimed at promoting financial inclusion in rural areas across Indonesia.


The comprehensive report unveils research findings that shed light on the intricate challenges faced by underserved and unserved rural women, such as limited access to financial services, mobility constraints, inadequate internet access, and barriers to digital adoption.

Employing a deductive-inductive hybrid approach and leveraging multiple data sources—including interviews with experts, policymakers, and practitioners—the study draws the following conclusions about the financial needs and preferences of women in rural areas of Indonesia:

-  Spatial analysis of underserved villages with high economic activity reveals a complex tapestry of financial services touchpoints, though with gaps in service that amplify challenges to access and use. In Eastern Indonesia, 67% of the population is rural and unserved.
-  Underserved and unserved rural women utilize creative financial management strategies amid limited financial services accessibility and climate risks. Women diversify their income, use a range of saving and borrowing channels, insure against risk in multiple ways, juggle remittance sending and receiving, and leverage social capital. For example, one woman's income is derived from two sources: cultivating shrimp and cultivating milkfish, with distinct timelines for harvesting each and tailored strategies (including loans and pre-selling the harvest) for managing her savings in the lean months.
-  Mobility, internet access, and digital adoption persist as challenges to the use of formal financial services and products. There is a high correlation between rural areas with consistent, reliable internet connection and the adoption of



QR codes, but reliable internet has not penetrated all rural areas.

-  There is a strong correlation between women in political leadership and financial access for both men and women: Women's World Banking found a statistically significant positive relationship between villages with women leaders and its number of bank agents.

Building on these insights, with input from policymakers and providers, the report proposes a range of strategies to enhance financial inclusion for underserved and unserved rural women. These strategies include expanding financial products and services, improving infrastructure, equipping bank agents for their multifaceted roles, and establishing collaborative partnerships among a range of stakeholders.

Ultimately, we aim to formulate an efficient goal-based and woman-centered approach to meeting the needs of women in rural areas that ensures the security and prosperity of their households while heeding the constraints they face.



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Introduction

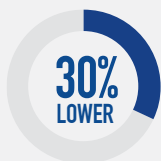
Over the past few years, the Indonesian Government has made notable progress toward its ambitious goal of near-universal financial access by 2025.

The World Bank reports that Indonesia has closed the gender gap in account access, with about half of women and half of men possessing an account at a financial institution.¹ However, accessing basic financial services continues to be a considerable challenge for rural women: within underserved and unserved rural areas, people must often travel long distances simply to access ATMs and bank branches. Even if services are available, customers face long queues, especially during payday periods. Complex logistics can lead to opportunity costs for small businesses, as the time and cost spent on traveling and waiting at financial institutions could have been used for more productive endeavors. Simply stated, the distinct characteristics and financial needs of unserved and underserved communities are not adequately addressed by the existing financial services system.

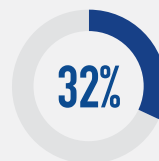
The financial inclusion landscape in Indonesia has changed dramatically over the past decade. No longer are 'last mile' financial services only brick-and-mortar institutions with heavy foot traffic. Instead, a mix of multipurpose agents, personal technology devices, and semiformal services like savings and credit groups serve rural areas. The resulting patchwork of financial tools and resources that a woman utilizes builds on the tools she has access to and the way she innovates to spend, save, borrow, and plan. Because of this shifting landscape and the unique needs of women in hard-to-reach areas, the strategies that the financial services ecosystem used to provide access to early adopters will not be the ones that reach the remaining half of Indonesia's population that continues to lack access to ('unserved') or fails to use ('underserved') financial services.

BOX 1. Reaching the Most Remote Indonesians with Financial Services

Account ownership in Indonesia is

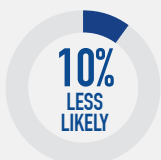


than the regional East Asia & the Pacific average



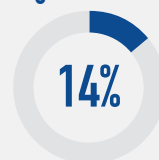
of Indonesians are involved in agriculture

Rural adults in Indonesia are



to have an account than their urban counterparts

Agriculture makes up



of Indonesia's GDP



Indonesians live in rural areas

There is a strong economic and empowerment need for Indonesia to ensure a range of financial services reach rural areas

1. Demircüç-Kunt et al. (2022). The Global Findex Database 2021: Financial inclusion, digital payments, and resilience in the Age of COVID-19. World Bank.

Rural communities contain many micro-, small-, and medium-sized businesses (MSMEs), which are essential to economic prosperity in Indonesia. Rural communities also include agricultural areas essential for Indonesia’s food security. Notably, rural areas have the highest development needs and the fewest available resources.² To address the goal of “leaving no one

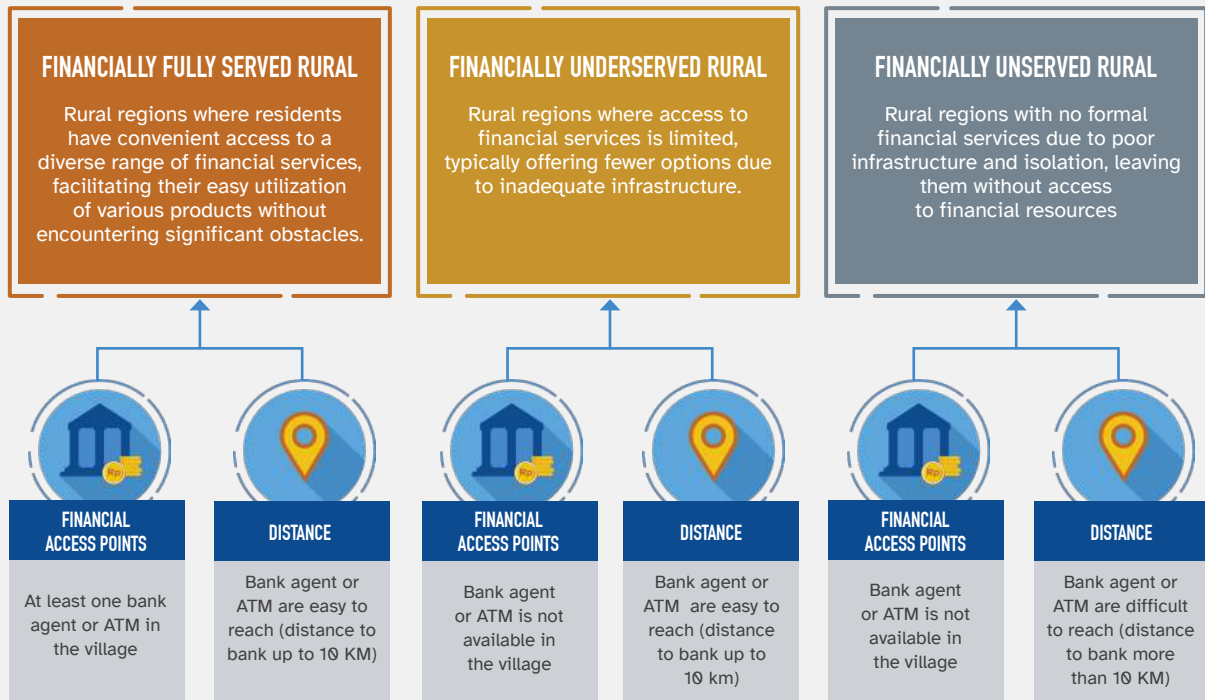
behind,” policymakers and providers cannot ignore the needs of these unserved and underserved communities. The research emphasizes the importance of improving financial access and quality inclusion of rural customers, particularly for women and girls, for the sake of their long-term economic resilience.

BOX 2. Research Approach and Methodology (see Appendix A)

The objective of this research is to comprehensively assess underserved and unserved regions in Indonesia through the lens of financial services engagement. To meet this objective, we mapped the current landscape of Indonesian financial inclusion using Podes 2022 dataset and explored how financial services players

might actively engage underserved and unserved rural women customers with a range of financial services. The results and analysis are meant to produce strong evidence for both policymaking and the development of relevant financial solutions for underserved and unserved women.

FIGURE 1. CATEGORIZATION OF UNDERSERVED AND UNSERVED RURAL REGIONS DOWN TO VILLAGE LEVEL



1. Tamilarasu, A. (2014). Role of banking sectors on financial inclusion development in India: An analysis. *Galaxy International Interdisciplinary Research Journal*, 2(2), 272–276.; Jansson, T. (2001). *Microfinance: From village to Wall Street*. Inter-American Development Bank. <https://publications.iadb.org/en/publications/english/viewer/Microfinance-From-Village-to-Wall-Street.pdf>; Hannig, A., & Jansen, S. (2008). *Inclusive financial system reforms: What works, What doesn't, and why?* Draft Report. Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ); Sarma, M., & Pais, J. (2008). *Financial inclusion and development: A cross country analysis*. Paper presented at the Conference on Equality, Inclusion and Human Development, organized by HDCA and IHD. <https://www.icrier.org/pdf/Mandira%20Sarma-Paper.pdf>



This research aims to answer the following questions:

- 1 What is the current distribution of unserved and underserved customers in rural regions, and how has this landscape evolved over time?
- 2 How do the unserved and underserved rural women manage their financial needs and conduct financial transactions?
- 3 What factors contribute to the ongoing dynamics of financial inclusion in these mapped unserved and underserved regions?
- 4 How can unserved and underserved rural women customers achieve enhanced financial access and quality inclusion?

The research employs a deductive-inductive hybrid methodology, integrating literature reviews, expert interviews, and geospatial data analysis using ArcGIS software and authoritative databases. This dual-method approach, incorporating both qualitative and quantitative

analyses, ensures a thorough comprehension of the financial landscape. The precision of the study is heightened by categorizing regions into fully served, underserved, and unserved in order to enhance the accuracy of research outcomes.

Research Findings

Women's World Banking's research on unserved and underserved customers is positioned alongside a body of literature from researchers and activists.³



Like our counterparts at other financial services institutions, we have found that a lack of financial services does not translate to a lack of financial and economic activity: rural and remote areas of Indonesia with poor connectivity and limited services are indeed teeming with economic and social activity requiring active money management, risk mitigation, and seizing opportunities. Nevertheless, Women's World Banking has identified a range of both supply- and demand-side challenges limiting unserved and underserved women from active and meaningful engagement in formal financial services. On the supply side, operational challenges, connectivity problems, and poor infrastructure hinder the ability of financial service providers (FSPs) to connect with customers in the same way they do in areas with higher population density. On the demand side, despite

high trust in the financial system, women struggle with mobility, time poverty, awareness, and a lack of interoperability between limited services offerings. What we did not find is equally notable: missing from this list of demand-side challenges are digital literacy and personal technology device access. A decade ago, these were the primary constraints to engaging rural women; today, women actively use smartphones and tablets, yet do not engage with formal financial services through their digital devices. In this section, we touch on these challenges, first sharing descriptions of women customers and their villages of residence, then articulating the factors that keep women who live at the end of financial services' reach from meaningful formal financial services engagement.

3. IDEO (2022). Faster product-market fit for digital finance at the last mile. <https://www.financialconfidence.design/last-mile-user/>; The Financial Agency of Indonesian Women. (2021). Last mile money. <https://www.womenandmoney.design/>; PwC Indonesia. (2019). Indonesia's fintech lending: Driving economic growth through financial inclusion. https://www.pwc.com/id/en/fintech/PwC_FintechLendingThoughtLeadership_ExecutiveSummary.pdf

Spatial Disparities: Unveiling Financial Service Gaps in High-Economic Activity Underserved Villages



Nationally, there are 75 bank branches per 1,000 people, six government owned postal offices (PT Pos) offering online payment services per 100,000 people, and two Pegadaian (pawnshop) branches offering gold savings and pawning services per 100,000 people. When assessed regionally, the data show a growing concentration of financial access points in the capital region. Meanwhile, from 2018 to 2022⁴, unserved and underserved regions have experienced a lower service density ratio: within those regions, approximately 52% of villages in Indonesia have bank agents and 16% of villages have ATMs nearby. However, ATMs are far more concentrated (85%) in financially fully served regions.

Troublingly, unserved areas have experienced a slowdown in the growth of bank agents and ATMs over the past few years, with a decrease of approximately 48% and 14% respectively (Figure 4). One potential reason for this decrease is banks' strategic shift in their expansion plans, particularly when a major bank decides to focus on urban markets. This often leads to the reallocation of resources, such as personnel and infrastructure, to urban areas to capitalize on the potentially higher returns associated with urban customers. Consequently, the reduced investment in rural or less profitable areas results in a significant decline in the ratio of bank agents in those regions,

leading to a skewed distribution of bank agents and a lower ratio of agents per village or per customer in rural areas compared to urban areas. Moreover, the rise of digital wallets and other online payment methods could be diverting financial transactions from traditional bank agents and ATMs. Our qualitative data underscores the rising prominence of digital transactions in remote areas. While physical presence and investments in agents remain vital, it's crucial to recognize that consumers' growing reliance on digital payment platforms may impact the demand for traditional bank agents and ATMs. This dynamic highlights the evolving landscape of banking services and the need for a comprehensive approach that balances physical and digital channels to meet customer needs effectively.

Geographic data layered with financial service access points show underserved and unserved populations across Indonesia's regions (Figure 2). In the West region, 34% of the population is underserved. The Central region, despite 53% moderately served, faces a notable challenge, with 35% of its population falling in the underserved category and the remaining 11% in the unserved category. The East region emerges as the most underserved, with just 10% of its population having access to financial services, and a significant 67% remaining unserved. Even as anecdotal evidence

4. Podes data are gathered through surveys encompassing all villages in Indonesia, which occur three times within a 10-year period. Datasets represent the latest available information.

points to the potential of a more digital future, it will remain important to build out physical access for onboarding, cash in/out, education, and offering of additional products and services.

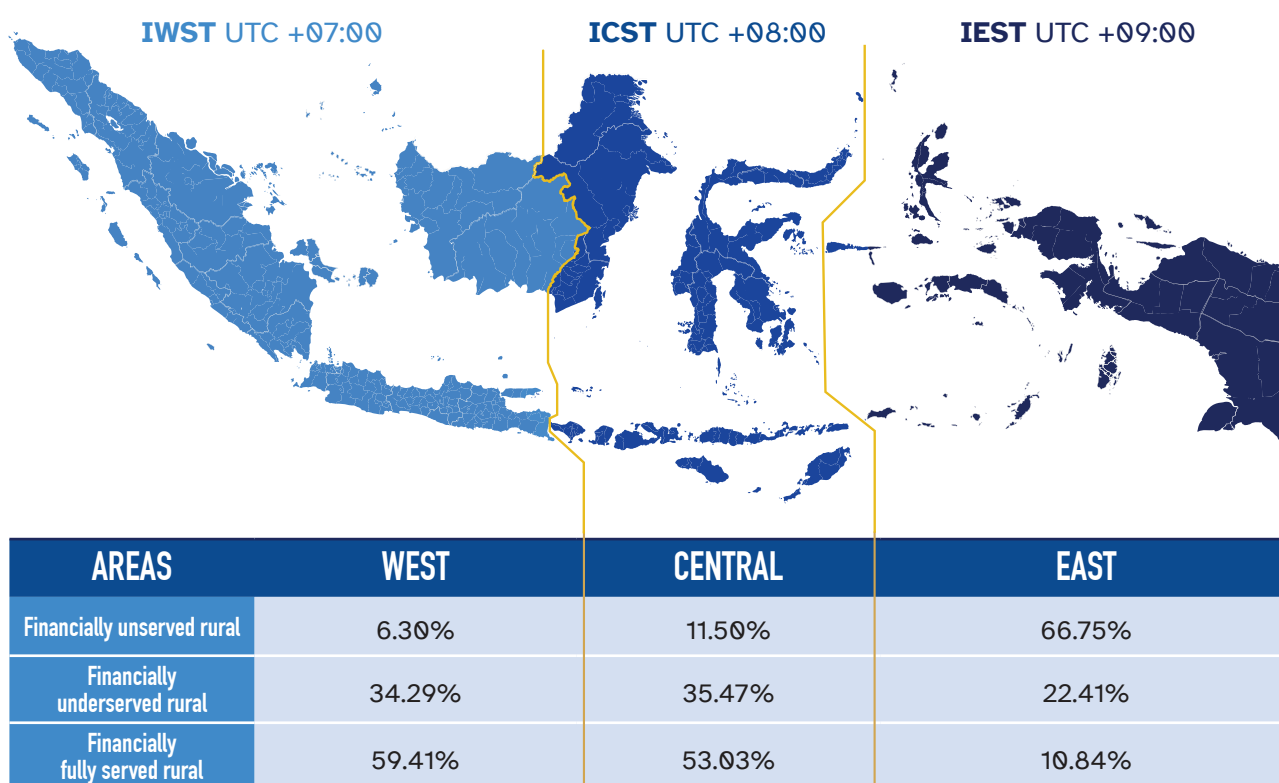
In addition to mapping current ATM and bank branch locations, we assessed changes in what we term ‘outreach,’ defined in this study as the change in the number of ATMs and bank branches across regions between 2018 and 2022. Results show a decline in both service provision in some regions outside Java, especially in the East region (Figure 3), as well as in financial services access points in underserved regions—despite a simultaneous increase in fully served regions (Figure 4).

This dichotomy indicates a persistent challenge to ensure equitable access to financial services. The ongoing decline in services among underserved regions, especially in eastern Indonesia, emphasizes the need

for targeted interventions to bridge the widening gap in financial access. Meanwhile, the significant increase in financial access points in fully served areas signals the necessity for comprehensive initiatives beyond urban centers to address disparities and foster inclusive economic development.

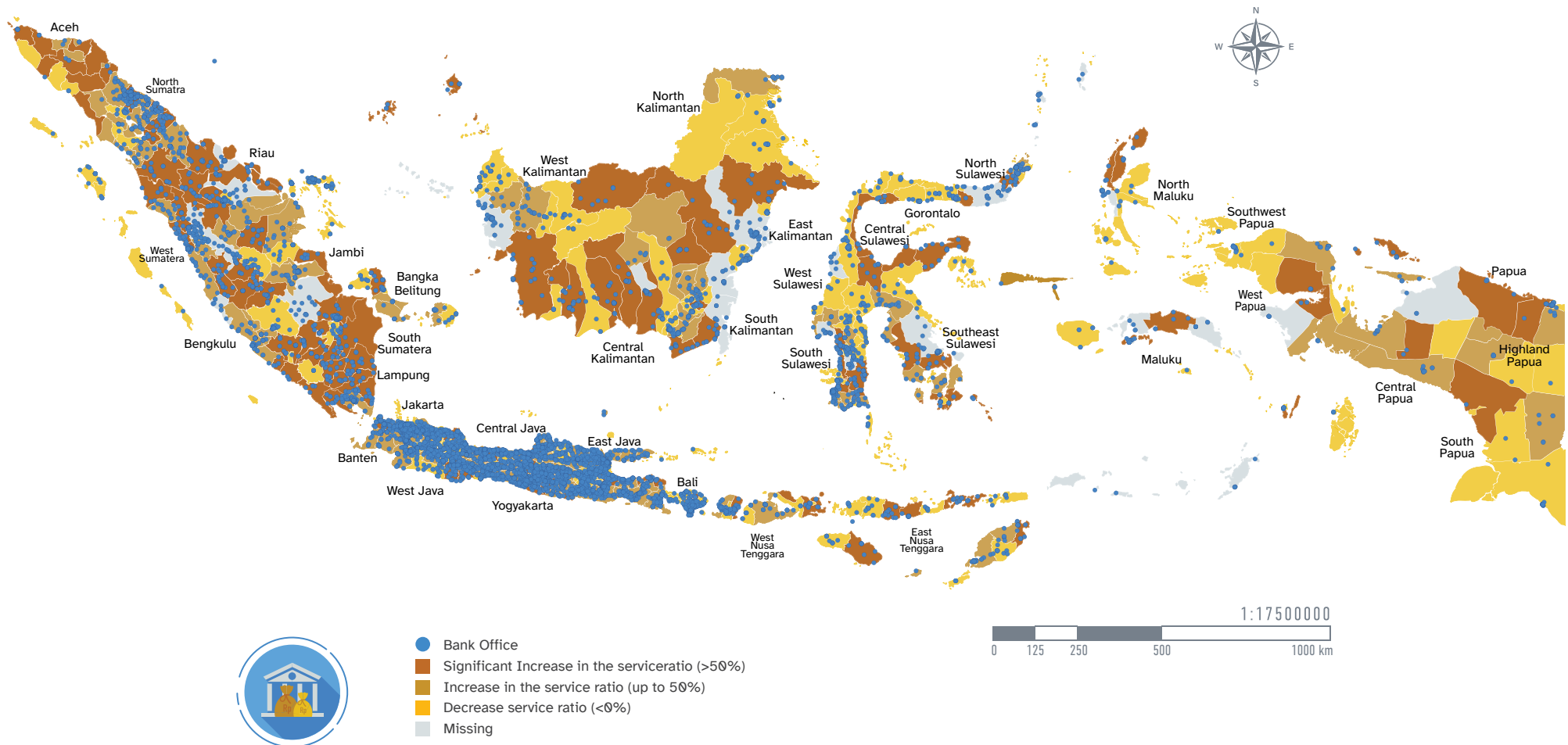
In selecting a proxy for distance from financial services, we focused on key financial activities, including saving money, taking loans, and conducting payment transactions. Our survey responses show that women in rural areas predominantly engage in formal financial transactions with Over-the-Counter (OTC) payments and top-ups being the primary drivers, followed by savings and loans. Preferred access points for OTC transactions include banking agents and Payment Point Online Banks (PPOBs) such as PT Pos, Indomaret, and Alfamart. For those involved in savings and loans, bank branches, Pegadaian, and PPOBs emerge as their preferred access points (see Figure 9).

FIGURE 2. MAPPING OF FINANCIALLY UNSERVED AND UNDERSERVED AREAS ACROSS INDONESIA



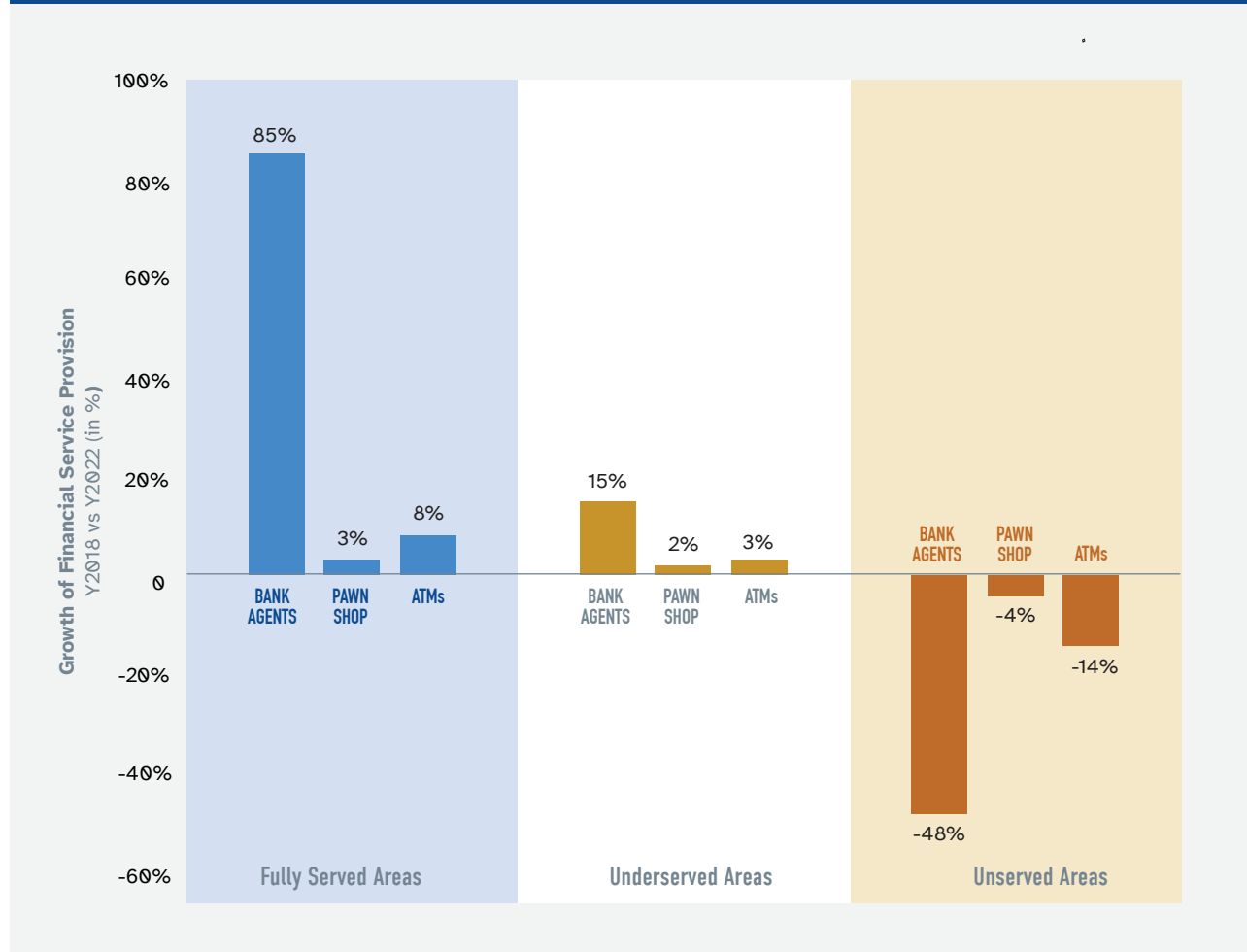
Source: BPS, 2022, analyzed by the author. Segregation by time zone is used to account for the considerable east/ central/ west context of the country. ‘Financially unserved rural’ defined as villages without a banking agent or ATM nor one within 10 km. ‘Financially underserved rural’ is defined as villages without a banking agent or ATM, with the nearest ones at a distance of <10km. ‘Financially fully served rural’ is defined as having at least one banking agent or ATM within the village.

FIGURE 3. THE GROWTH OF BANKING SERVICES OUTREACH TO DISTRICTS BETWEEN 2018 AND 2022



Source: The branch bank address data is obtained from various financial service institutions in Indonesia, either directly extracted from their publicly available websites or provided by the respective banks. In total, there are 12,693 bank branch addresses collected from six largest banks in Indonesia. The specific bank locations were determined using the complete addresses of state-owned and large private bank branches and banking agents. The shading gradient indicates the relative growth of banking services outreach to the population in each district from 2018 to 2022. Some data are missing or unavailable and are consequently presented in the form of unshaded areas. Each dot represents the exact bank branch locations. We categorize changes in the number of access points (in percent) of bank branches based on specific numerical thresholds (<0, up to 50%, >50%) over the period of 2018–2022. Projected population data for the year 2022 at the district level is taken from the National Statistical Agency.

FIGURE 4. CHANGES IN FINANCIAL ACCESS POINTS IN INDONESIA, 2018–2022



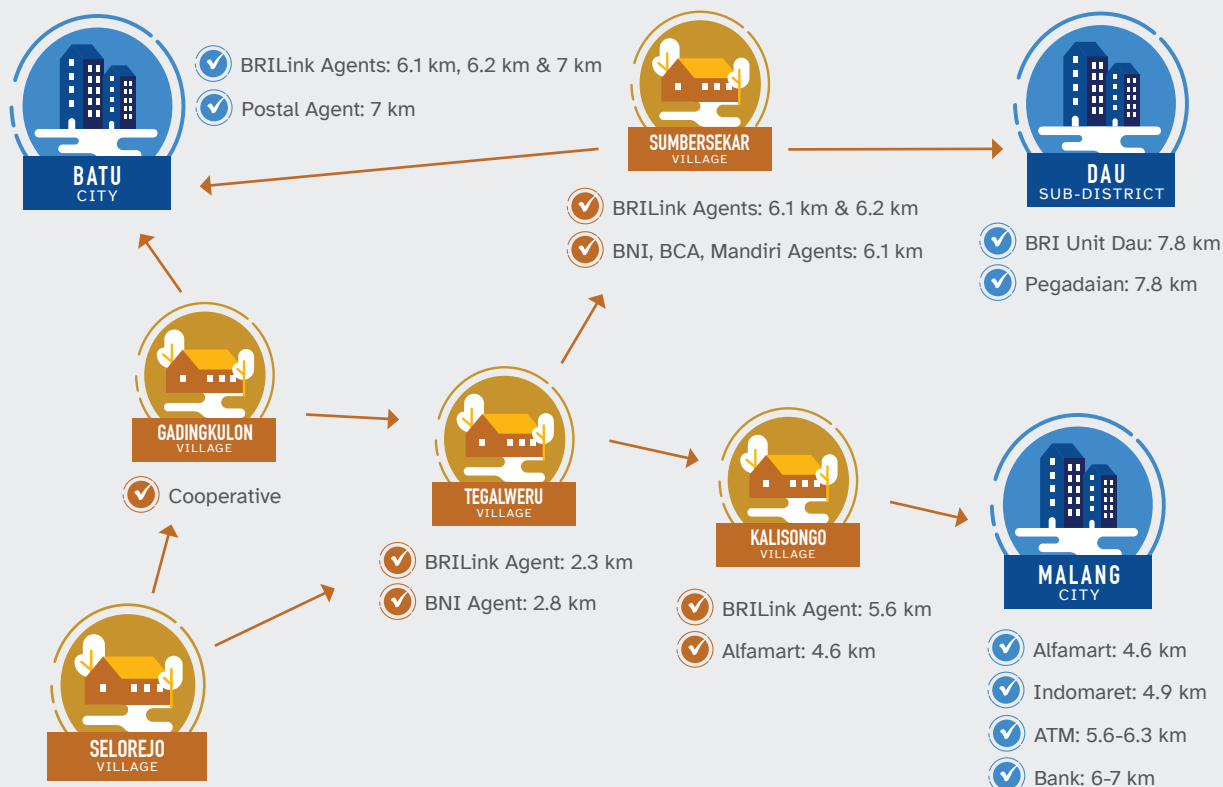
Source: BPS, analyzed by the author. 'Fully served': There is at least one bank agent or ATM in the village; 'Underserved': No bank agent or ATM in the village, but access to one within 10 km of the village); 'Unserviced': villages without a banking agent or ATM nor one within 10 km. The percentage indicates the growth of service provision from 2018 to 2022.

We found that approximately 8% of villages in Indonesia possess the potential for financial services expansion: such villages exhibit high economic activity despite limited availability of financial services (proxied by

bank agents and ATMs)—making them ideal targets for financial access point (FAP) expansion. Most of these villages are scattered throughout Eastern Indonesia as well as in Java (figuratively seen in Figure 5).⁵

5. We developed an index of potential financial services expansion. The first step was to collect official data on the number of markets, shops, and other economic centers across various regions; this information served as a proxy for the economic activities and productivity levels within each area. Simultaneously, data on the existing number of banks were gathered to assess the current availability of financial services. The index was then calculated by establishing a ratio between the number of economic centers and the number of banks in each region. A higher ratio implied that there was a greater concentration of economic activities relative to the number of available FAPs, indicating a potentially unserved or underserved market. The rationale of such an index is that FAPs tend to follow the productivity of economic activities in each region. The goal, therefore, is to ascertain which unserved and underserved areas have high economic activity but low availability of FAPs—or conversely, which areas experience an oversupply of financial services, which could justify resources being shifted to other regions.

FIGURE 5. THE VICINAGE OF SELOREJO VILLAGE



Source: Authors. Based on field visit and market observations

An Illustration: Women's Financial Resilience in Selorejo Village

Figure 5 illustrates the financial access points for Selorejo residents. Selorejo is known as one of the biggest tangerine and coffee producers in Malang. It is located ~15 km away from Malang, the second largest city in East Java. Despite road accessibility and its potential as agrotourism destination, formal access points such as bank branches, ATMs and PPOBs are located at far distances from Selorejo residents.

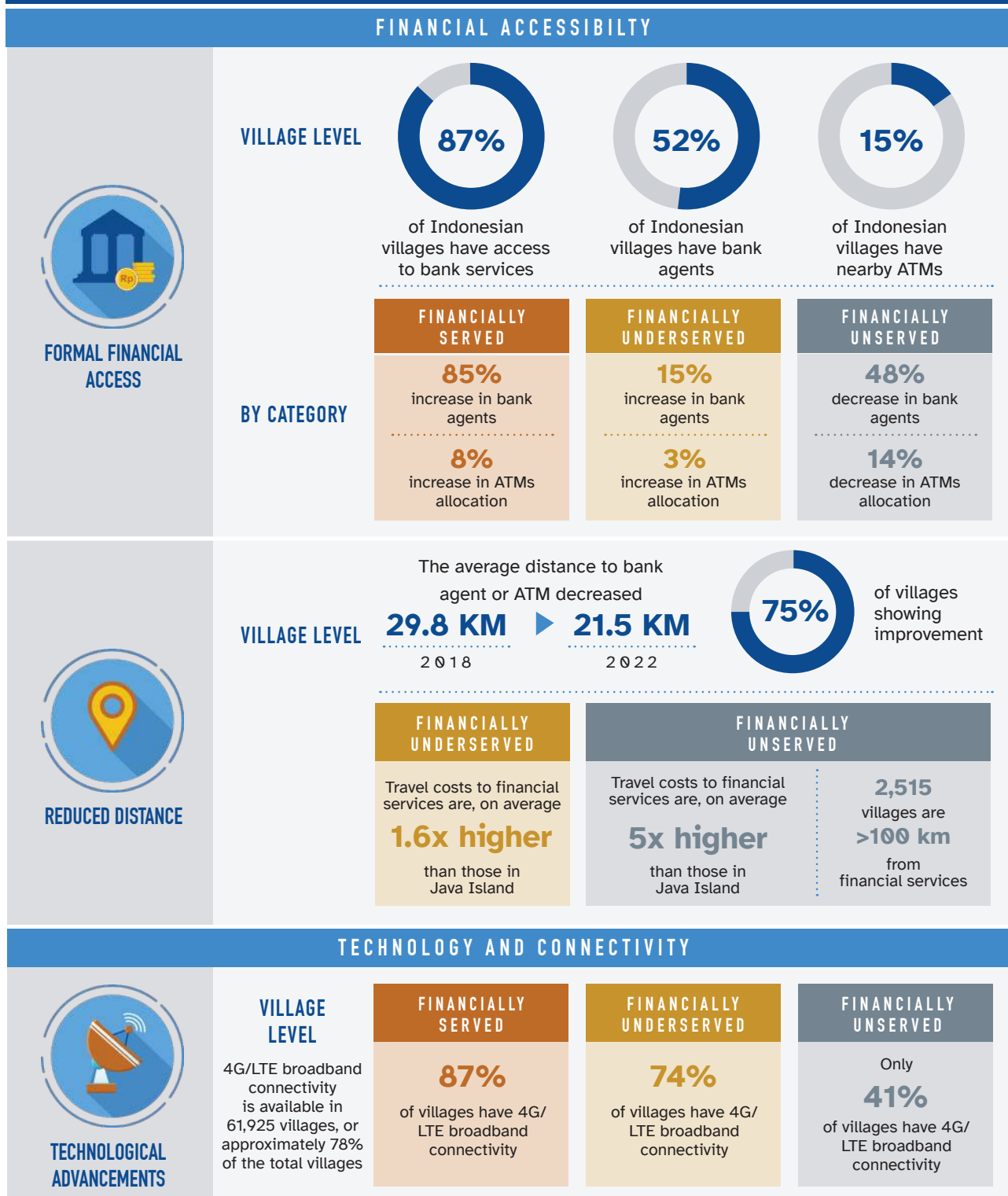
In Selorejo Village, the closest financial access points are only two banking agents (+ 2.3-2.8 km away) in Tegalweru Village and to the east of Selorejo Village. Meanwhile, the majority of agents tend to be clustered in Sumbersekar Village in Dau and Junrejo Village in Batu, both 6 km away. The nearest bank branches, ATMs, Pegadaian (pawnshop), are situated 7-8 km away from the village, known as the Sengkaling area. While services are within 10 km, the threshold set by women as a manageable distance, women reported that certain services can only be completed in dedicated bank branches in the Karangploso sub-district

or the DAU sub-district, both of which are 10-12 km from Selorejo Village. For example, women noted they must travel farther to sign loan documents or ask clarifications on a loan status.

Trusted formal financial services might offer financial products needed by communities with agricultural-dependent livelihoods. With its dependency on tangerine and coffee production, Selorejo has a highly climate-vulnerable economy. Selorejo smallholder farmers may suffer loss of income and productive assets when a natural disaster strikes, such as droughts can severely impact water availability, affecting crop yields and livestock, which are crucial sources of income for smallholder farmers. Selorejo women farmers state that they prefer to borrow from their friends, family, or loan sharks for emergency needs. However, if and when the bulk of their social network loses their incomes simultaneously, they consequently face few options for credit.

Underserved and Unserved Rural Women Leverage Creative Financial Management Strategies Amid Limited Financial Services Accessibility and Climate Risk

FIGURE 6. CHARACTERISTICS OF UNDERSERVED AND UNSERVED RURAL VILLAGE



FINANCIAL BEHAVIOURS



ECONOMIC LIVELIHOOD

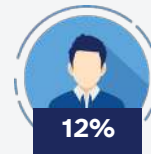
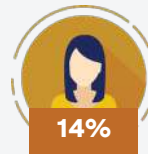
- ✓ Many establish diversified, informal livelihoods, characterized by fluctuating and uncertain income sources.
- ✓ Daily household spending is used mostly for purchasing production inputs (for farmers/ fishers) and daily food. Most transactions rely on cash and are transacted over the counter.



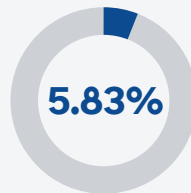
DIGITAL PAYMENT OPPORTUNITIES

VILLAGE LEVEL

Women slightly edged out men in digital merchant payments



NATIONWIDE



of Indonesian have ever used e-banking transactions



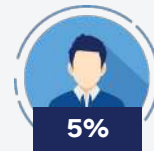
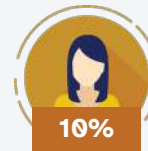
BORROWINGS BEHAVIOURS

INFORMAL

Access credit from:

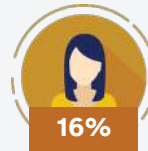
- ✓ Traders/ off takers
- ✓ Family members and friends
- ✓ Loan sharks

More women, borrowed from savings clubs compared to men



FORMAL

Women outpaced men in borrowing from formal institutions



SAVINGS BEHAVIOURS

- ✓ During harvest periods, it is common to save money in large sums.
- ✓ Informal saving occurs in food staples, gold and jewellery, and livestock.

Source: Statistical insights are derived from the author's analysis. Data on financial service accessibility, technology and connectivity, and financial behaviours derived from BPS data.



Amid limited access to financial services and climate challenges, our study unveils the hurdles encountered by these women. These findings shed light on the adaptive strategies employed by these resilient women to navigate intricate financial terrain, such as income diversification, creative saving methods, borrowing practices, insurance coverage, remittance dynamics, community support, and social capital. We expand on these adaptive strategies through descriptions and illustrative quotes from our qualitative research:

Income Diversification

Informal livelihoods governed by various and seasonal income streams are prevalent among last-mile customers. 97% of the population in rural Indonesia have agriculture-dependent or agriculture-related livelihoods (85% and 8%, respectively), primarily working in the farming and fishing sectors.⁶ Furthermore, the results illuminate the proactive diversification of income sources among women in rural areas: in response to the inherent unpredictability of their primary livelihoods, many women also exhibit resilience by engaging in side hustles or diversifying their agricultural or aquacultural pursuits.⁷ This multifaceted approach not only serves as a risk mitigation strategy, it also contributes to a more stable financial foundation for women and their households. By cultivating multiple crops or fish or

engaging in alternative income-generating activities, these women create a robust buffer against income fluctuation. Such adaptive strategies enhance their economic resilience as well as underscore the dynamic ways in which unserved and underserved rural women actively manage and respond to the challenges of income variability in their pursuit of sustained financial security.



My main income comes from cultivating shrimp and milkfish. It takes me 3 months and 6 months respectively to harvest them. I sell all shrimp to a particular off-taker who provided me with a loan; it's the only way for me to repay that loan. I also seek crabs while waiting for the shrimp and milkfish to harvest. Recently, I open a small food stall, utilizing my house porch. I use the money from selling food to buy food for my family.”

A fisherwoman, 56 years old, Tarakan – North Kalimantan

6. The Village Potential Statistics (Podes) 2022

7. Women farmers make up approximately a quarter of Indonesia's agricultural workforce (BPS, 2022)



Saving Money

Women respondents prioritize saving a portion of their incomes during good times to establish a financial cushion during challenging periods. Specifically, they seek and exercise season-specific strategies to decrease household vulnerability and maintain consumption levels in lean times, often employing various savings channels.

Religious communities' informal savings groups offer other channels for savings, allowing women to strategically set aside funds for future needs or periods of less income.



I can get IDR50 million for each orange-harvesting season, and I keep some of that money in a grocery store nearby. I am confident doing so because I know the owner very well and I trust her. I have an estimation of how much [money there is] when I come and collect my regular grocery items. So, when I am out of rice, I can easily collect another sack of rice I need from that store until my balance ends. Both the owner and I keep manual records for tracking purposes. Basically, saving in the grocery store helps me keep my money safe and gives me insurance that my family will not be starving, at least for the next eight months' time."

A woman farmer, 52 years old, Selorejo – East Java



Interviews with an NGO-serving farmer and fisher communities reported:



In North Sulawesi, A group of fishermen utilize church communities as a means to save due to the absence of financial service providers in their vicinity. Regularly, they deposit funds at the church during weekly worship sessions and withdraw them during the Christmas celebration. In other areas where fishermen are largely dependent on buyers/collectors, some not only accumulate debts with these collectors but also engage in savings within their network. For communities situated near or along the Trans-Sulawesi Highway, they adopt a collective savings approach, consolidating funds that are subsequently deposited into a bank account. This method is considered more efficient in terms of cost savings compared to individual banking deposits.”

A Gender and Financial Inclusion Expert, Indonesia

However, participating in informal savings schemes facilitated by religious institutions can exert a strong social pressure—particularly the fear of judgment or social consequences for non-participation—on individuals, creating a potential barrier to engaging in formal saving. Moreover, the security of funds in informal settings—a concern frequently voiced in Indonesia—lacks the transparency and accountability that formal financial institutions provide, raising potential risks such as theft from donation containers within mosques or churches.

Nevertheless, informal savings groups in other parts of the world persist even when there are formal channels available for saving, for both demand-side and supply-side reasons. On the demand side, for example, informal channels are tied to social capital and trust networks, with savings activity constituting a component of community engagement. On the supply side, financial institutions find it challenging to recreate the commitment aspect of saving, which nudges continued engagement. In Indonesia, FSPs can learn from informal mechanisms when looking to increase savings activity in formal accounts, as described in Ashraf et al. (2006). Establishing accessible and safe banking channels, coupled with transparent communication about the security measures in place, can alleviate concerns about the vulnerability of funds. Offering financial literacy programs to emphasize the benefits and safety of formal saving, while respecting the cultural importance of community savings, can further mitigate the social pressure associated with informal schemes.

Borrowing

A prevalent and essential practice among women in rural areas is borrowing money, be it from family, friends, or through formal or informal loans. This widespread approach serves as a financial lifeline, enabling women to address immediate needs and invest in both their personal and household livelihoods.

Access to affordable and accessible finance emerged as a catalyst for empowering rural women. Credit as a financial tool provided by accessible formal FSPs allows women to save in order to procure necessary materials and offer financial assistance to family members during times of need or emergencies. The multifaceted nature of borrowing is thus pivotal in fostering resilience and economic sustainability among women in rural areas, illustrating the instrumental role that accessible financial resources play in transforming not only individual lives but entire communities.



The average population of Selorejo has KUR loans with BNI and BRI. My husband and I have been taking KUR loans for years, and because we have gained the bank's trust, I no longer need a certificate as collateral. My husband's KUR loan from BRI was used to pay land rent and has been fully paid off. In the past, we learned about KUR loans from BRI employees who visited our home. Besides land rent, the BRI KUR loan was also used for production costs of IDR25 million, household expenses, and monthly donations for celebrations averaging IDR2.5 million."

A woman farmer, 52 years old, Selorejo - East Java



Field observations suggest that the acceptability and feasibility of utilizing personal assets as collateral for secured loans is intricately tied to the sociocultural dynamics, norms, and perceptions of women's ownership of assets (Box 3). In areas where women's asset ownership is considered uncommon according to traditional norms or where communal attitudes shape financial decision making, the uptake of secured loans by women is likely to be adversely impacted. Further research delving into the specific factors influencing the observed decline in loan uptake among women in such areas is therefore essential.

BOX 3. Regional Variations: Influence of Socio-Norms and Cultural Practices on Women's Property Ownership

In some areas within west Indonesia, we found the socio norms and cultural has somewhat define land ownership, impacting women ability to access secured loan:

While in other areas within central Indonesia, local and cultural practices may provide women with a larger opportunity to access loan:



SELOREJO VILLAGE

In Selorejo – East Java, women have legal rights to land and housing ownership. However, traditional customs still influence the inheritance patterns, favoring male heirs. The ownership of farmer cards, necessary for accessing agricultural subsidies, is often determined by land size, potentially disadvantaging women with smaller plots of land.



RUMPIN VILLAGE

In Rumpin – West Java, our respondent explained that most land ownership is held by the government or developers, leaving women dependent on using land under their husbands' or other family members' names. This scenario emphasizes the lack of legal ownership, and the challenges women face in securing property rights. The tradition of listing only the husband on land certificates further exacerbates to the gender-based power imbalance in land ownership.



TARAKAN VILLAGE

In Tarakan – North Kalimantan, there are instances of women using their land as collateral for loans, presents a scenario where customary land practices differentiate between "dati" and "pusaka" land, with men traditionally having control over the former and women over the later ownership custom.



KOTAMOBAGU VILLAGE

The local culture in Kotamobagu – North Sulawesi, influenced by Adat Mongondow, also recognizes women's rights to property ownership, with inheritance and joint purchases involving both spouses being common. This cultural practice not only empowers women but also reflects a broader recognition of gender equity in property ownership. However, land certification remains an issue, with some women lacking formal documentation of their property rights.

Insurance Coverage

Our research highlights the significant challenges in the adoption of insurance products among rural farmers, particularly in the context of agricultural output and climate risk. Despite the inherent risks associated with farming (such as unpredictable weather patterns), none of the interviewed farmers possessed coverage for crop insurance. Farmers and fishers being informal workers, who often operate in non-formalized or unregulated sectors, may not be automatically included in Indonesia's universal health coverage (BPJS). They may also face further challenges in meeting the requirements or contributing to the program due to irregular income or lack of formal employment contracts. Moreover, women farmers rely more on non-farm income to overcome climate risk instead of purchasing crop insurance; their hesitancy to do so was attributed to factors such



The Covid period not only affected the family's finances but also had an impact on my physical health. I experienced symptoms of high blood pressure, so I had to buy Amlodipine medication out of my own pocket because I don't have health insurance (BPJS). To cope with the business losses during the Covid pandemic, I worked as a farm laborer on my neighbor's land, earning a daily wage of IDR50,000. Although there were times when I had no income, I didn't resort to borrowing money. Instead, I chose to live frugally and sold oranges to anyone willing to buy. During that time, I also sold my gold for capital to rent the land again and cover daily expenses."

A woman farmer, 52 years old, Selorejo – East Java



as lack of awareness regarding available crop insurance options and limited understanding of how to access and utilize such services.

Similarly, within the healthcare domain, our research exposes a prevalent lack of awareness among women farmers regarding BPJS. Even among those acquainted with it, their knowledge is primarily anchored in existing familiarity and individual past experiences solely with BPJS Kesehatan (healthcare benefits). Strikingly, none of the interviewees were aware of BPJS Ketenagakerjaan (the Employment Social Security program for work-related claims), which is designed for non-wage recipients like farmers or fishers. Despite BPJS Ketenagakerjaan's comprehensive coverage for work-related risks, including occupational accidents, death and old-age benefits, and pension plans for both wage and non-wage recipients, our findings reveal a significant information gap, particularly among the 60% of the working-age population engaged in the informal sector (BPS Sakernas, 2023). As of July 2023, the Employment Social Security program has provided protection for 27% of Indonesia's entire workforce, which encompasses 7.61% of informal sector workers.

Remittance Sending and Receiving

The women interviewed also found ways to reduce transaction fees when sending or receiving financial support from friends and family. In a notable trend, some women and their family members utilize multiple remittance platforms, demonstrating a keen understanding of optimizing financial transactions to further reduce costs. This adaptive approach reflects women's resilience as well as savvy financial management strategies to ensure the sustainability of their households amid economic challenges.



My son lives in a different city for pursuing his education. He instructed me to register on an e-wallet platform that he also uses. Topping up my balance in that platform is easy because I can access a nearby Alfamart to do a cash-in balance with no admin fee. With this e-wallet, we both get benefits; I can send my money freely and my son can use whatever balance is left in his account to sell air time to his friends.”

A fisherwoman, 38 years old
Sangtombolang – North Sulawesi

It is important to consider the security risks that women might encounter when using different money transfer services. While they're cleverly finding ways to save on fees, they also need to be wary of potential scams or hackers accessing their accounts. Some platforms might charge higher fees, which could be a problem for women who might not know all their options. This could mean they end up losing some of the money they are sending or receiving. Therefore, crucial to address these risks and make sure women understand what they're being charged to help them manage their money better and stay financially secure. 'Phygital' (Physical - Digital) solutions can provide an added layer of protection by allowing them to conduct transactions through physical channels, such as agent locations or service centers, while still leveraging digital platforms for convenience. This approach not only enhances security but also ensures accessibility for women who may have limited digital literacy or access to technology, thereby empowering them to manage their finances more effectively and mitigate the risks associated with digital transactions.





Community Support and Social Capital

Community support is integral for women facing financial challenges in last-mile areas, where networks of family, neighbors, buyers or collectors, and local communities provide essential assistance. This support, ranging from emotional to financial, is a crucial resource during financially trying times. Particularly noteworthy is the role of personal and community trust in fostering access to informal lending, which emphasizes the significance of social cohesiveness in ensuring financial resilience among women in these communities.

“

Every day, I sell the fish that my husband catches. When his catch is low, I will go to the nearest harbor to buy fish from other fishermen whom I know very well. When the price suits me, I pay these fishermen up front. But if the price is not suitable, I sell their fish first, before I pay them. Usually, my profit is around IDR120,000–125,000, and I use most of that for daily household needs.”

A woman fish trader, 45 years old,
Saparua Island - Central Maluku

Mobility, Internet Access, and Digital Adoption Persist as Obstacles to the Use of Formal Financial Services and Products



Mobility and Road Access Are Important Considerations in Financial Access

Proximity and the cost of travel are critical factors in women's accessibility to formal financial services in rural areas. For example, results reveal that communities in Kalimantan, Maluku, and Papua spend 5–9 times more on travel as compared to those on Java Island⁸ (see Appendix D, Figure 12). Moreover, our data analysis on Podes 2022⁹ highlighted that certain districts in Sumatra, Java, and Kalimantan have experienced an increase in travel costs to access financial services, implying that financial services may be becoming less accessible in these districts. This shift, as gleaned from the data, points toward a potential reconfiguration of

financial service distribution away from the communities in these regions.

Public transport availability also plays a pivotal role in accessibility, coupled with the alignment of transport schedules with financial institutions' operational hours. For instance, while public minibuses offer affordability, their intermittent availability on certain days forces individuals to use more expensive alternatives like motorcycles, significantly escalating women's transportation costs particularly on weekends. In such scenarios, transportation expenses may outweigh the

8. Among these is Subang Jaya Villages, Central Lampung, where the distance to the bank increases to approximately 97 km. In addition, the travel distance to financial access points for communities in Papua is almost nine times longer as compared to the population in Java Island.

9. See Appendix D.



FINANCIAL INSTITUTION ACCESSIBILITY OBSTACLES

benefits of accessing financial services, consequently posing a potential deterrent to doing so.

women's transportation costs particularly during weekends. In such scenarios, transportation expenses might outweigh the benefits of accessing financial services, posing a potential deterrent.



Public transportation in Rumpin is often unavailable because there is no demand. DAMRI¹⁰ runs every 3–4 hours during the weekend, but it is costly for short trips since it charges a single tariff of IDR10,000 regardless of the distance. It serves intercity mobilization from Cicangkal, Kecamatan Rumpin to Kecamatan Leuwiliang.”

A village chief, 28 years old, Rumpin – West Java



I cannot ride my motorcycle, as I don't have it currently. If I want to transfer money to my family in my hometown (Makassar), I will ask my sister to go to a nearby [PPOB] agent.”

A fisherwoman, 31 years old, Tarakan – North Kalimantan

The aspect of safety further compounds the issue: Areas with secure travel conditions foster a more favorable environment for financial services accessibility, encouraging visits to financial institutions. Conversely, areas with high crime rates, especially slum areas, pose risks for women, particularly during nighttime travel. Concerns about theft or violence can deter women from accessing financial services, limiting their ability to manage finances effectively. Additionally, regions with inadequate infrastructure and hazardous roads present challenges for women, particularly when commuting on motorcycles. Fear of accidents or injuries during such journeys further constrains financial inclusion efforts in these areas.

10. DAMRI is a state-owned nationwide public transportation company with small, medium, and large buses.

Digital Adoption among Rural Women Still Depends on Internet Readiness and Digital Knowledge, Necessitating Top-Down Intervention and a Government-Driven Approach



Internet availability emerges as an important factor influencing the adoption of digital financial services, with respondents in rural areas showing a higher likelihood of utilizing these services when equipped with stable internet connections. The strides made in enhancing broadband access across Indonesia, fueled by technological advancements and the ubiquity of mobile phones, have forged pathways for digital payments and mobile banking services. Challenges persist, however, particularly in regions like Sulawesi, Kalimantan, and Papua, where internet access remains weak (see Appendix B, Figure 13).¹¹

In locations like Petung (East Kalimantan), Tarakan (North Kalimantan), we found that QRIS and e-wallets are used frequently, especially in cafés and supermarkets. This could be due to a growing awareness of digital payment options or the availability of necessary infrastructure, such as EDC machines and QRIS terminals. If so, it would suggest that FSPs are making top-down decisions to extend digital payment options to more remote areas through agent networks.

Conversations with rural women proficient in transacting using QRIS at nearby agent banking and minimarkets reveal a consistent pattern: In areas where e-wallets are actively embraced, youth emerge as early adopters of any digital financial platform, influencing others in the community to explore and adopt these platforms. Our qualitative data from Saparua Island corroborates this, revealing that a significant number of younger generation members possess smartphones and demonstrate the ability to use digital apps.

Their enthusiasm and positive experiences with digital financial platforms contribute to the community's curiosity and openness to exploring and eventually adopting these technological solutions. This cascading effect emphasizes the influential role that young people, as early adopters, play in shaping the financial behaviors and preferences of the larger community in rural areas. In contrast, in areas where QRIS and e-wallets are seldom used and the availability and reliability of EDC machines and QRIS terminals are uncertain, businesses may lack the necessary equipment to support the adoption of digital payments.

11. 4% of villages have not seen any improvement in their broadband connectivity in recent years. Similarly, 4% of villages, on average, still have 2G internet connectivity. There are several regions in Java and Sumatra where internet access has not shown significant development; most of the areas experiencing stagnant progress are located in Sulawesi, Kalimantan, and Papua (source: author's analysis from Podes 2022 data). While we did not conduct a primary quantitative survey, our qualitative research revealed that all respondents' own smartphones. Additionally, based on the latest BPS data (2022), smartphone ownership in rural areas stands at 60.18%, indicating a significant 8% increase compared to urban ownership.

Rural Payments and Banking Agents Are Trustworthy Touchpoints for Women's Continual Usage, but Agents Struggle to Maintain Their Operations due to Mobility Issues. This Obstacle Undermines Their Efficiency, Ability to Provide Effective Community Service, and Poses Liquidity Challenges, All of Which Are Crucial for Maintaining Agents' Financial Stability

Trust plays a significant role in the adoption of financial services. Individuals may be more inclined to open bank accounts or engage with financial institutions if they have a trusted intermediary, such as a family member or friend, who can guide them through the process. To extend formal banking services to last-mile communities, brick-and-mortar banks employ agent banking, where community members act as intermediaries. Operating in mom-and-pop shops, these agents build personal connections; women agents are perceived as particularly suited to the role due to qualities like strong communication skills and patience.



I knew DANA [digital wallet service] from my son, who went to a college in Manado; he used DANA to receive money transfers from me and used it to sell airtime to his friends. My son asked me to open a DANA account to buy airtime, pay bills, and send money to him. The Alfamart staff can teach me how to use it since they are local people and very friendly. Usually, I go to Alfamart to send money to him because it is free of charge. However, if there was a system error in Alfamart, I had to go to the nearest BRILink agent—around 5 kilometers away—to do it, and the agent charged me IDR10,000 per transaction.”

A fisherwoman, 38 years old
Bolaang Mongondow – North Sulawesi

These rural agents adopt diversification strategies, combining their agent business with other income-generating activities. Their financial sustainability relies on service charges and sharing fees earned from transactions, which are essential for covering operational costs. However, liquidity management is challenging, requiring a delicate balance between cash for daily transactions and digital transactions to meet customer demands.

To enhance their earnings from their agent business, agents reported adjusting their working hours to accommodate customer needs, combining agent and grocery store services to increase profits and offering mobile agent services to customers who prefer remote transactions. Agents are often the sole agent in the area and operate with extended hours, relying on word-of-mouth recommendations for distribution and marketing.¹²



To ensure the profitability of agents, the bank must exert additional efforts in educating them to serve as tellers and customer service representatives: namely, comprehending and effectively explaining financial products such as savings and deposits, understanding technical systems, and being adept at providing simple educational and advisory services regarding suitable products for customers.”

A bank's microbanking SVP, Indonesia

12. We interviewed 12 rural banking agents to understand their perception of how to become a successful banking agent.



Interview data signal a significant challenge faced by rural agents concerning both agent and customer comprehension of bank's products and its banking application features. This challenge is not unique to the agents: it also presents a hurdle for banks themselves. To ensure the profitability of agents, the bank must invest more in agents' education; bridging agents' knowledge gap becomes paramount not only for agents' success but for the overall effectiveness of financial inclusion initiatives in rural communities.

“While conducting awareness campaigns, we can inform the community about the existence and functions of our banking agents in that area. We can explain thoroughly that conducting transactions with our agents is secure and trustworthy, as it is well-documented electronically in the banking system, given our bank being a government entity. Such outreach activities aim to build customer confidence in our agents, making them perceive their functionality as on par with a branch. However, these endeavors usually incur significant costs and involve complex execution.”

A bank's microbanking SVP, Indonesia

Government and Financial Services Support Have Reached Rural Communities but Translating It Into Effective Implementation Requires Improved Communication and Education Campaigns

Our analysis highlights the success of the government's conditional cash transfer program (PKH) and ultra-micro (UMi) financing in positively impacting last-mile communities.¹³ PKH, through targeted cash transfers to low-income families (particularly women), addresses various needs, yielding positive outcomes in economic conditions, healthcare, and education. Similarly, UMi financing, which provides minimal loans to small businesses, has proven transformative by offering previously inaccessible capital, driving growth and enhancing sales in last-mile communities.¹⁴



In North Sulawesi, fishermen commonly use WhatsApp and Facebook to sell their catches. If, in the future, the government aims to encourage fishermen to embrace e-commerce for selling, [communication campaigns could include] entities like fish entrepreneurs who share their successful experiences in leveraging e-commerce for fish sales. [Communication and education efforts] can also feature testimonials emphasizing the importance of activating bank accounts as a means of conducting business transactions and enhancing business. For instance, the use of bank accounts builds buyer trust, and fishermen can utilize transaction data for more organized record-keeping."

A coastal community interventionist, Indonesia

However, challenges in the communication of government programs promoting financial inclusion, as revealed in interviews with experts in coastal communities, suggest gaps in awareness among fishers and bank branch staff in rural areas. This stresses the urgent need for improved communication campaigns, with continuous reinforcement of education and socialization emerging as a crucial component for program success.

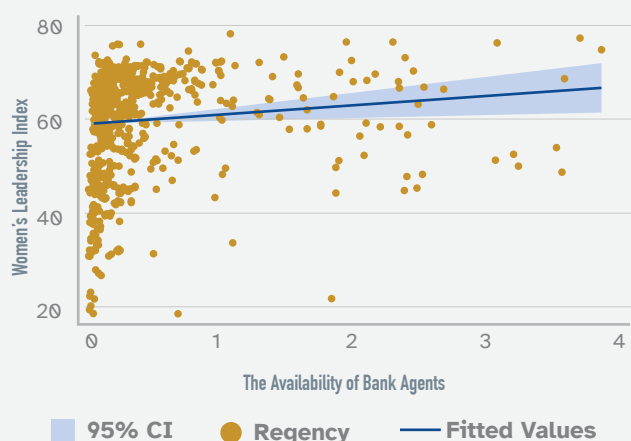
Building on this understanding, our analysis delves into the positive correlation between women in village leadership and the number of bank agents in villages, which emphasizes the multifaceted contributions of women leaders to rural community development in Indonesia (see Box 4). Several investigations highlight the favorable connection between women's leadership and community development: Cherotich (2022) identifies the significant influence of women leaders on economic empowerment through actions such as policy implementation, income-generating programs, capacity building, and financial support. These findings suggest that the strong social networks of women leaders contribute to enhancing credit accessibility and expanding the network of bank agents. This is achieved by disseminating information about credit options, building trust within the community, and inspiring women to assume roles as bank agents.

13. The PKH program, or Program Keluarga Harapan (Family Hope Program), is a conditional cash transfer program that includes ensuring that pregnant women receive prenatal care, and 88% of government support beneficiaries live in rural areas.
14. Harvard Business Review (2023). How Ultra micro holding connects finance to millions in Indonesia. <https://hbr.org/sponsored/2023/12/how-ultra-micro-holding-connects-finance-to-millions-in-indonesia>

BOX 4. The Impact of Women's Leadership on Rural Financial Inclusion in Indonesia

Using national census data, our analysis indicates a positive relationship between women in village leadership and the number of bank agents in villages, emphasizing the diverse contributions of women leaders to rural community development in Indonesia.

FIGURE 7. HOW WOMEN IN LEADERSHIP ROLES AFFECT FINANCIAL ACCESS IN VILLAGES



Notes: The research methodology involves constructing an index to measure women's leadership by considering three main indicators: women as the Head of Village, women as the Secretary of the Village, and women's participation in village's deliberation body. Bank agents represent the availability of these services in each village. This research employs Polychoric Principal Component Analysis to construct the index, from which a composite score is calculated. This composite score serves as the Women's Leadership and Bank Agent indices, which provide a quantitative measure of the extent of how women's leadership shapes bank agent numbers. The data are scaled up to the district level. We also found that villages with women leaders are 2.5 times more likely to have agent banking presence.

These findings suggest that the strong social networks of women leaders contribute to enhancing credit accessibility and expanding the network of bank agents. This is achieved by disseminating information about credit options, building trust within the community, and inspiring women to assume roles as bank agents.¹⁵



In the village of Maginti (West Muna district - Southeast Sulawesi), the wife of the village head takes on the role of a bank agent and initiates a savings and loan group. She recognizes the additional value these activities bring to her village and understands that progress in the village will garner increased attention from both local and central governments. Furthermore, she acknowledges the significance of government programs flowing through bank accounts and aligns this with actively participating in financial inclusion programs for her community.”

A Gender and Financial Inclusion Expert, Indonesia

15. The Ministry of Women Empowerment and Child Protection collaborates with local governments to implement the Friendly Village for Women and Childcare (Desa Ramah Perempuan dan Peduli Anak, or DRPPA) program. This initiative systematically reports women's leadership indicators from the village to the central level, facilitated by both national and regional overseers. The program's bottom-up approach enables the Ministry to access gender-disaggregated data, effectively addressing gender-related issues at the grassroots level.

Recommendations

Holistic Approach for Improving Financial Access and Quality Inclusion for Underserved and Unserved Rural Women

1. Strengthen the Enablers Through Collaboration among Multiple Stakeholders

In the often-overlooked landscape of last-mile areas, where geographic isolation and limited infrastructure hinder financial access, a collaborative approach emerges as the key to unlocking the economic potential of women and entrepreneurs in these communities. The findings detailed above serve to provide stakeholders with an understanding of the unique challenges experienced by women at the end of formal financial services' reach. Thus, stakeholders should consider implementing the following financial inclusion endeavors in such regions:

Consumer Labs, an innovative concept gaining momentum, stand out as instrumental tools in this collaborative toolkit. These labs delve meticulously into the preferences and requirements of last-mile communities, functioning as dynamic spaces for bottom-up data collection. By immersing themselves in the daily lives of farmers and fishers, consumer labs extract invaluable insights. They become forums for participatory research, allowing community members to express their financial needs, aspirations, and challenges. Results provide evidence and insights that transcend statistical abstractions, offering a more profound comprehension of the intricacies of last-mile financial ecosystems.

The role of consumer labs extends beyond data collection; they become spaces for ideation and co-creation. Stakeholders can collaboratively design tailored financial products and services that align with the evidenced needs and preferences of the last-mile population. This grassroots approach fosters inclusivity, ensuring that the financial solutions developed are not just accessible but resonate authentically with the diverse realities of these communities. Insights gleaned from consumer labs inform policy decisions, refine product development strategies, guide targeted



marketing campaigns, and fuel ongoing research initiatives. In essence, consumer labs become dynamic hubs of participatory development, empowering last-mile communities to shape the financial services that directly impact their lives.

The Indonesian Ministry of Cooperatives and SMEs has initiated the creation of Integrated Business Service Centers (PLUT KUMKM) aimed at fostering a supportive business ecosystem across regions. Aligned with Presidential Decree No. 2/2022, focusing on National Entrepreneurship, this initiative integrates an incubation model, with PLUT serving as a mentoring center. It also provides consultations for tasks like business permit applications and acts as a marketplace and meeting hub for MSME buyers and sellers. Incorporating a consumer lab into these centers could enhance their impact, fostering more entrepreneurs and reshaping the economic landscape by strengthening micro, small, and medium enterprises and encouraging their growth with formal financial support.

Public Investment plays a pivotal role in this collaborative effort. Ensuring convenient public transportation, affordable internet access, and viable economic centers is essential for facilitating access to and use of formal financial services for women in unserved and underserved areas. In some communities, local organizations or cooperatives operate community

shuttle services tailored to specific needs such as transportation to markets, schools, or healthcare facilities.¹⁶ Expanding digital ride-hailing platforms to last-mile regions enhances accessibility, allowing women to request rides through mobile apps. Establishing secure transportation involves initiatives such as enhancing

FIGURE 8. CONNECTING THE DOTS: INFRASTRUCTURE FOR BETTER FINANCIAL SERVICES FOR UNDERSERVED AND UNSERVED CUSTOMERS

Infrastructure Related Barriers	Policy Recommendations	Example of Success Measurements
Transportation Limitations	<ul style="list-style-type: none"> Invest in improving local public transportation infrastructure Implement safety measures on public transport Introduce and promote alternative, affordable, and safe transportation options for women 	<ul style="list-style-type: none"> Increased usage of public transportation Community feedback on safety measures, and A decreased reliance on motorcycles for women's mobility
Transportation Costs	<ul style="list-style-type: none"> Advocate for policies to control and stabilize gasoline prices Establish community-based transportation initiatives Subsidize public transportation operational costs for individuals in remote areas while introducing e-money as payment feature 	<ul style="list-style-type: none"> Reduced financial burden on individuals accessing financial services Increased utilization of community-based transportation, and Lower commuting costs reported by individuals in remote areas
Safety Concerns	<ul style="list-style-type: none"> Improve safety infrastructure in poorly lit areas Increase police presence and implement community policing in high-crime areas Implement safety measures at financial institutions 	<ul style="list-style-type: none"> Reduction in reported safety concerns Increased utilization of services in poorly lit areas, and Community feedback on enhanced safety measures at financial institutions
Infrastructure Quality	<ul style="list-style-type: none"> Invest in improving the quality of roads and public facilities Ensure accessible and well-maintained infrastructure around financial institutions Implement measures to make financial institutions physically accessible, including ramps and elevators 	<ul style="list-style-type: none"> Community feedback on improved infrastructure Decreased travel time and costs reported by users Increased accessibility to financial institutions, and A rise in reported ease of access for individuals with physical disabilities

16. UN Pulse offers an “after dark” survey of which transportation methods women consider to be safe. See Almuna et al. (2019). <https://www.unglobalpulse.org/document-setelah-gelap-after-dark-bahasa/>



the conduct of service provider drivers, offering subsidies for specific nighttime routes, establishing safe waiting areas, deploying street security personnel, and developing digital applications that cater to the safety of women.¹⁷ With continuous evaluation of a various ‘success measurements,’ multifaceted investment in public infrastructure fosters an environment in which financial inclusion can thrive—in turn providing women with additional tools and opportunities for economic growth (Figure 8).

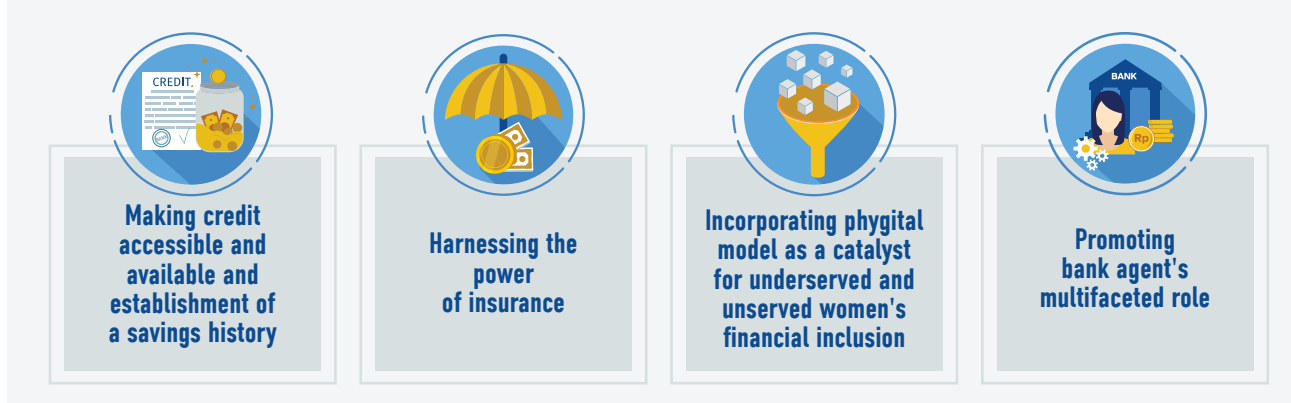
The journey toward financial inclusion requires a concerted effort in the collaborative partnerships among multiple stakeholders, which include the government, the private sector, and local communities. Such partnerships can pinpoint regions that continue to grapple with difficulties in accessing financial services.

Backed by research and data, by engaging directly with local communities, policymakers can gain profound insight into how to shape targeted initiatives at the national level. Regular convenings, with representatives from various sectors, serve as forums to discuss challenges, share best practices, and define collective agendas. Setting measurable success indicators with agreed-upon timelines ensures accountability and progress assessment. One example is Women’s World Banking’s own Women’s Digital Financial Inclusion Advocacy Hub, a collection of FSPs, grassroots organizations, and government representatives working to progress women’s financial inclusion. The goal of local community engagement is to create an efficient, human-centered, and measurable approach that spans generations, one that particularly benefits women and vulnerable communities (see Appendix C, Figure 14).

17. UN Pulse offers an “after dark” survey of which transportation methods women consider to be safe. See Almuna et al. (2019). <https://www.unglobalpulse.org/document/setelah-gelap-after-dark-bahasa/>

2. Expanding Suitable Products and Service Design for Underserved and Unserved Rural Women and Communities

FIGURE 8.1. TO EXPAND SUITABLE PRODUCTS AND SERVICES FOR UNDERSERVED AND UNSERVED RURAL WOMEN, THE GOVERNMENT, FSPs, AND OTHER STAKEHOLDERS MUST FOCUS ON FOUR AREAS:



The following section showcases several product and service-design strategies to suit the needs of rural women:

Making Credit Accessible and Available, and Establishment of a Savings History

For women in rural areas, having a savings account means more than just a place to store money: it functions as a tool for accumulating financial resources, in turn enhancing the ability to weather unexpected expenses. It is essential to promote awareness of the fact that savings extend beyond traditional banks, especially within informal economies typical of last-mile communities, highlighting the significance of informal savings in rural unserved and underserved contexts. The challenge, however, lies in determining how to enhance this awareness in order to ultimately shift women's preferences from informal to formal FSPs.

Equally important is fostering an understanding that maintaining a recorded financial history is paramount. While many in last-mile communities engage in informal work, this recorded history can be harnessed by financial service providers as evidence of consistent and documented income. Our research highlights the critical need to tailor credit assessment methodologies to the unique circumstances of these communities. Specifically, credit assessments should account for irregular income patterns typical among daily informal

workers, such as fishers and traders, who rely on cash transactions. Moreover, considerations for farming cycles and harvesting seasons, which extend beyond the conventional three-month assessment period, are imperative. Acknowledging these nuances is vital, as conventional credit scoring models may prove inadequate in addressing the diverse challenges faced by last-mile communities.

Harnessing the Power of Insurance

Climate risk insurance can serve as a lifeline for last-mile communities, particularly for those reliant on climate-sensitive livelihoods like agriculture. The inherent susceptibility of these areas to climate-induced challenges, ranging from extreme weather events to droughts and floods, often translates into substantial economic setbacks for these communities. Crop failures, livestock losses, and property damage can severely disrupt livelihoods; climate risk insurance can therefore serve as an important financial safety net in such scenarios. By compensating individuals for losses incurred due to climate-related events, this form of insurance may facilitate a faster recovery process, mitigating the risk of these communities collectively experiencing extreme poverty.

In the context of last-mile areas where informal workers, particularly farmers and fishers, dominate economic sectors, customized insurance products are essential.



Insurance providers could work in tandem with existing social security coverage, like universal health insurance for non-wage recipients (BPJS Ketenagakerjaan Bukan Penerima Upah) and Paddy Farming Insurance (Asuransi Usaha Tani Padi, or AUTP).¹⁸ Collaborative efforts, including partnerships and joint insurance packages, could enhance the comprehensiveness of coverage. To encourage the adoption of such integrated insurance solutions, considerations for premium subsidies and incentives could be leveraged to make insurance more affordable for informal workers. Crucially, expanding agricultural insurance options demands a seamless alignment of policies and regulations to ensure the effective integration of climate risk insurance into the broader financial safety net available for last-mile communities.

Incorporating a Phygital Model as a Catalyst for Underserved and Unserved Women's Financial Inclusion

Our study underscores the formidable challenges that women in last-mile areas face when attempting to access traditional banking services. The requirement to travel long distances not only consumes valuable time, it also imposes significant physical and logistical burdens. One of the principal advantages of mobile transactions lies in the immediate accessibility of funds. This immediacy stands in stark contrast to the delays of the traditional banking system, which often create

financial uncertainties for women in these underserved areas. The shift to a phygital model is a promising approach to address the unique challenges faced by women in last-mile communities. This model seamlessly integrates physical and digital elements, acknowledging the diverse preferences and trust issues prevalent in these areas. By providing in-person touchpoints, the phygital model builds trust and accommodates those who may be hesitant to fully embrace digital solutions. In the context of financial inclusion, where connectivity issues and seasonal-dependent economic activities prevail, the phygital model acts as a bridge, offering tailored financial services that align with the specific needs of last-mile communities.

The phygital approach is especially relevant in Indonesia, where last-mile communities engage in activities like agriculture and fishing. The model recognizes the importance of incremental transitions to digital, allowing individuals to start with familiar touchpoints and gradually adopt digital services as they become more comfortable. Moreover, the phygital model supports financial literacy efforts by providing personalized guidance through in-person interactions, which contributes to a more inclusive and responsive financial ecosystem. Overall, the phygital model is poised to play a pivotal role in shifting unserved and underserved customers toward inclusive formal financial services.¹⁹

18. BPJS Ketenagakerjaan is part of the broader social security system in Indonesia and plays a crucial role in ensuring the welfare and protection of workers in various employment sectors. Asuransi Usaha Tani Padi (AUTP) is a form of protection for farmers through an agreement between farmers and the insurance company to bind themselves in the coverage of risks in agricultural businesses, especially rice farming.

19. Jain, D., & ETBFSI (2022, May 22). Phygital model to drive the next phase of financial inclusion. <https://bfsi.economicstimes.indiatimes.com/blog/phygital-model-to-drive-the-next-phase-of-financial-inclusion/91638109>.



BOX 5. Building a Business Case for Serving Rural Areas: The Use of Mobile Phone Data in Last-Mile Financial Inclusion

The significance of mobile phone data in a financial inclusion strategy has the potential to shed light on human mobility patterns, social networks, and their correlation with both economic development and financial usage and access. However, the current underutilization of this valuable resource in existing financial inclusion efforts represents a missed opportunity for insightful results. Addressing the challenges associated with integrating rich mobile phone data into scant socioeconomic information necessitates methodological innovation and a careful consideration of biases to unlock the untapped potential of this data source.

In 2022, Bank Rakyat Indonesia's (BRI) introduction of BRIKodes, a digital strategy mapping 97% of villages and subdistricts, emphasizes the importance of building digital data in rural areas. By assigning

unique codes to administrative units, BRI has gained valuable insights into smartphone ownership density, economic behaviors, and activities in diverse regions. The BRIKodes application serves as a neutral tool, offering inclusion profiles and detailed financial service information for all villages under BRI's umbrella. With a wealth of data, BRI can tailor financial services to meet the unique needs of each region, contributing to their goal of achieving 90% financial inclusion by 2024. This initiative demonstrates how integrating digital technologies with physical infrastructure can facilitate last-mile financial inclusion efforts, addressing the needs of underserved rural communities effectively. Consequently, it emphasizes the significance of 'phygital' solutions in bridging the gap and ensuring equitable access to financial services in rural areas.

Promoting Bank Agents' Multifaceted Role

Promoting the multifaceted role of bank agents in last-mile areas is pivotal for expanding financial inclusion. Many bank agents in these regions come from diverse educational backgrounds and often encounter challenges in grasping the features of the agent application due to limited familiarity with technology. Recognizing this, financial institutions need to invest in additional training to enhance the agents' capacity. This involves equipping them to serve as tellers and customer service representatives, which necessitates a deep understanding and effective explanations of financial products, technical systems, and the ability to provide straightforward education and advice on products suitable for customers.

The potential of bank agents extends far beyond facilitating QRIS transactions. They can evolve into valuable financial educators who contribute to the dissemination of financial literacy in last-mile communities. Beyond simple transactions, bank agents can facilitate credit and loans, provide micro-insurance services, and even act as conduits for government benefit distributions. Moreover, by collaborating with, for example, e-commerce platforms, these agents can broaden their service offerings, cross-selling various financial products to meet diverse needs. Community events organized by bank agents further contribute to enhancing financial literacy, establishing them not just as transaction facilitators but as integral players in fostering sustainable income streams for themselves.

Enhancing the effectiveness of financial agents in remote areas involves a multifaceted approach. Allowing agents to work for multiple financial service providers, particularly in remote locations, can significantly broaden financial services accessibility. This cross-bank collaboration can be complemented by initiatives to boost agent competitiveness, such as implementing leaderboards or recognizing top-performing agents. Creating a competitive environment not only motivates agents but also improves overall performance. Additionally, rethinking the incentives' structure is crucial, aligning it with local use cases to drive engagement. For instance, introducing incentives for innovative use cases, like the "Save Your Change"



concept showcased in the Tabunginaja campaign²⁰, can provide a powerful incentive structure that resonates with the community's needs. This approach both encourages financial agents and aligns their efforts with the specific requirements of the local population, ensuring a more effective and sustainable financial inclusion strategy.

This multifaceted approach honors the unique needs of underserved areas, ensuring that financial services reach beyond the basics and address a spectrum of financial requirements in these communities. By transforming bank agents into holistic FAPs, the strategy contributes to the economic empowerment of the rural customers and reinforces the sustainability of income streams for the agents themselves.

Given the significance of liquidity challenges—especially in rural areas, where cash transactions are prevalent—a policy recommendation is proposed for OJK to consider targeted initiatives aimed at supporting agent liquidity and bolstering confidence in formal financial services. In regions where cash transactions are prevalent and community service relies on a single agent, OJK may consider measures to ensure optimal liquidity, especially during peak periods like paydays or benefit distribution days. Employing technology-driven solutions to monitor and predict cash demand could enhance efficiency. Optimizing operations through improved technology and data utilization holds the potential to reduce costs and enhance quality.

20. <https://medium.com/pulse-lab-jakarta/key-lessons-from-trialling-our-tabunginaja-justsaveit-behavioural-intervention-campaign-for-ad1746950e9c>

3. Harnessing Women Leaders and Youth as Part of Digital Financial Inclusion Initiatives in Rural Communities



Unserved and underserved rural women and communities face significant financial obstacles given their limited familiarity with financial services. To address these issues, a comprehensive strategy focusing on tailored financial education, responsible lending practices, and the development of a phygital model is critical. Simultaneously, efforts should be directed toward implementing strong cybersecurity measures and digital literacy programs to ensure the secure use of online financial platforms.

Harnessing women leaders as part of digital financial inclusion initiatives is imperative based on numerous investigations highlighting their significant influence on community development. Cherotich (2022) highlights how women leaders help empower communities economically through policies, programs, and support. Their extensive social networks improve access to credit and expand bank services by sharing important information and building trust. Data from Podes confirms this, showing that villages led by women are 2.5 times more likely to have banking services. This emphasizes the importance of leveraging women leaders' networks to make financial inclusion initiatives more effective.

Additionally, the younger generation, given their adeptness at using digital tools, can play a key role in bridging the technological gap that may exist among older residents in last-mile communities. Acting as mediators and educators, the younger generation can facilitate the integration of older generations into the formal financial ecosystem. This inter-generational

approach can accelerate the adoption of digital financial services as well as ensure that the solutions developed are culturally sensitive and aligned with the unique perspectives and conventions present in rural communities.

Youth and women ambassadors can contribute to financial inclusion through peer-to-peer influence, digital advocacy, leading educational campaigns, and fostering cultural sensitivity. They can serve as relatable messengers, spreading information, sharing success stories, and dispelling misconceptions about formal financial services. Their proficiency in digital platforms enables them to adeptly advocate for financial inclusion. Their awareness of local traditions ensures that initiatives align with cultural norms, enhancing their effectiveness.

Youth-led innovation hubs or online platforms can serve as collaborative spaces for idea exchange, which boosts creativity and local solutions. Initiatives led by youth could include skill-building programs or teaching practical skills like budgeting and digital financial management. Additionally, youth and women ambassadors can amplify the voices of the underserved, urging policymakers to design inclusive regulations. Collaborations with stakeholders, including financial institutions, NGOs, and local businesses, can further enhance the impact of youth-led initiatives to create a more inclusive and sustainable financial landscape in regions often unserved or underserved by formal financial services (see Appendix D, Figure 14).

16. BPJS Ketenagakerjaan is part of the broader social security system in Indonesia and plays a crucial role in ensuring the welfare and protection of workers in various employment sectors. Asuransi Usaha Tani Padi or AUTP is a form of protection for farmers through an agreement between farmers and the insurance company to bind themselves in the coverage of risks in agricultural businesses, especially rice farming.

Conclusion: Reaching Rural Women at the Edge of Finance



Women in rural Indonesia face a range of challenges. There is a complex tapestry of often poorly deployed financial services available to them, with high gaps in service for most. In response, women leverage an astounding array of strategies to manage their money, insure against risk, and take advantage of opportunities. Environmental challenges like mobility, internet access, and baseline digital financial capability persist, perpetuating low use of formal financial services.

However, there are strong signs—augmented digital public infrastructure, well-resourced government programs, and women in leadership, for example—that Indonesia already possesses many of the elements necessary for enhancing rural access to financial services for both women and men. With these improvements, the business case for increasing access to rural women will

come into sharper focus for improved private sector engagement.

When women, including those in rural areas, engage with financial services, there is a measurable increase in their economic empowerment (Hindriyani, 2024), which translates to greater control over financial decisions, increased financial independence, and an overall improvement in their well-being. The imperative for concerted efforts and innovative solutions to unlock the economic potential of rural areas in Indonesia is supported by the need to strengthen enablers through stakeholder collaboration. By implementing tailored financial solutions; expanding suitable products and service designs; and leveraging the roles of women, bank agents, and youth, stakeholders can improve financial access and foster meaningful inclusion for unserved and underserved women throughout rural Indonesia.

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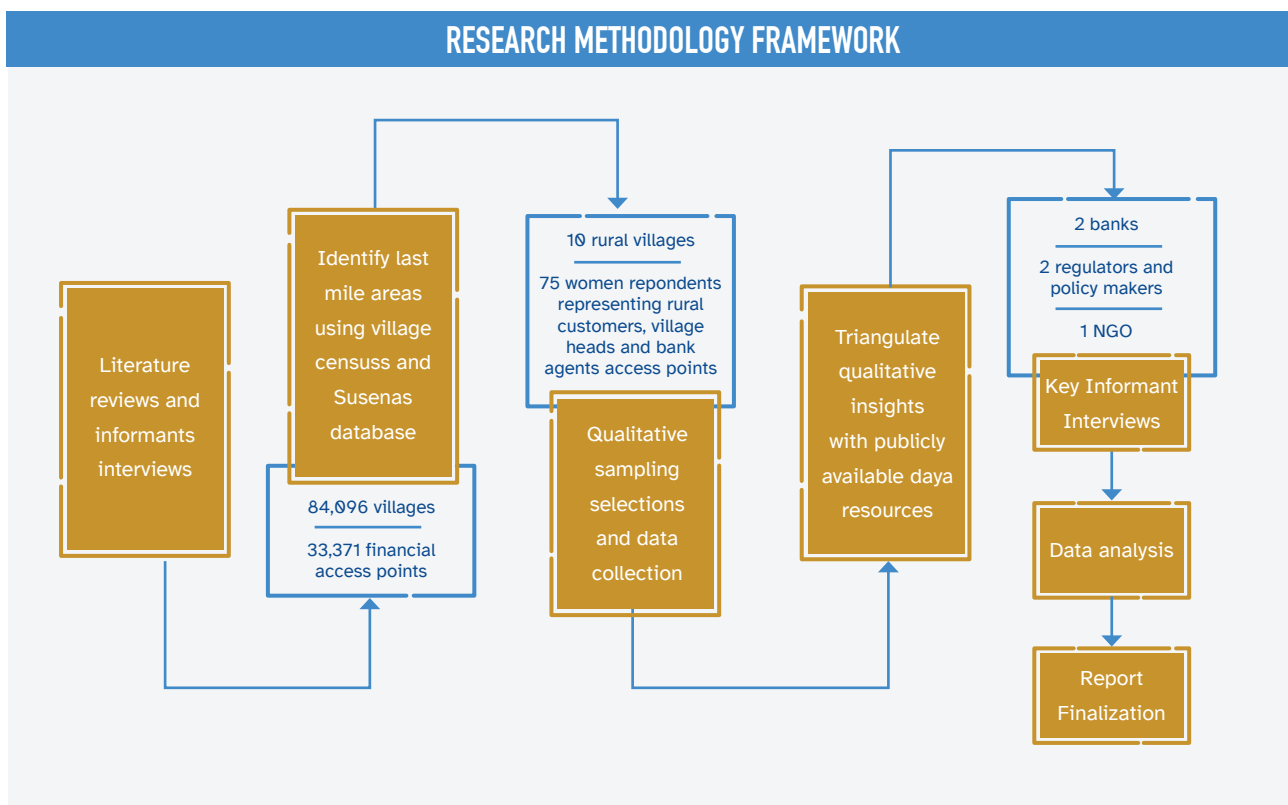
Appendix A: Research Methodology

This research employs a deductive-inductive hybrid approach, with multiple data resources. In the initial phase of the research, we conducted a thorough examination of existing literature concerning financial services in rural areas. This involved an analysis of multiple research studies, articles, and policy documents to identify key issues, policy gaps, and characteristics supported by empirical evidence. To complement this literature review, interviews were conducted with informants, including experts, policymakers, and practitioners. These interviews sought to gather additional insights, validate findings from the literature, and provide a nuanced understanding of the challenges and opportunities in the rural financial services landscape.

The next step was to identify rural areas by employing data from financial institutions. The data sources included information on the locations of banks, pawnshops, and post offices, obtained from various

financial institutions in Indonesia. This research employed geospatial data to map financial access points (FAPs); each FAP location was verified based on its complete address coordinates. Pre-processing stages were conducted to ensure the accuracy of bank names, addresses, postal codes, and latitude and longitude geodesic coordinates. ArcGIS software was utilized to process spatial data. The geospatial data was then transformed into a map format, facilitating the observation of the distribution of financial services across Indonesia's changes and trends over time.

We concurrently analyzed authoritative databases such as The Village Potential Statistics (Podes), including supplementary data from Susenas and Sakernas. To analyze changes over time, the research compared data from 2018 with data from 2022, the most recent data available. Through a meticulous analysis of this data, patterns and characteristics of rural areas were identified. Utilizing the categorized data of all



84,090 villages in Indonesia, the research focused on identifying fully served, underserved, and unserved areas. We selected 10 rural areas via a geographically stratified random sample of respondents for in-depth interviews. The research participants were drawn from East and North Kalimantan, Maluku and Maluku Islands, West and East Java, North Sulawesi, and West Nusa Tenggara. Qualitative data collection methods, such as interviews, and participant observations were employed in these areas to gain an in-depth understanding of the financial services experiences and challenges faced by the local population.

To strengthen the validity and depth of the qualitative insights obtained from fieldwork, we adopted a triangulation approach. This involved conducting interviews with various FSPs, including representatives from banks and bank agents, fintech companies, and regulatory bodies. By cross-referencing our findings with experts and key players in the finance and banking sectors, the research sought to ensure a comprehensive and accurate portrayal of the rural financial services landscape.

The collected data, both qualitative and quantitative, underwent rigorous analysis. Thematic analysis was applied to qualitatively interpret the insights gained from interviews, focus group discussions, and participant observations. Simultaneously, we employed statistical analysis to identify correlations and trends in the quantitative data derived from the Village Census and other relevant databases. This dual approach facilitated a comprehensive understanding of a multifaceted rural financial services environment.

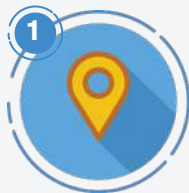
Based on the analyzed data, a preliminary report was drafted. The draft report underwent a review process involving stakeholders such as experts, policymakers, and FSPs. This collaborative feedback loop allowed for a more comprehensive and nuanced report enriched by the diverse perspectives of those involved. Incorporating the feedback received during the review process, the final report was prepared. This involved refining the content, addressing any identified gaps, and ensuring the inclusion of actionable recommendations.

Appendix B: Sampling Approach

The selection of villages for in-depth interviews is typically guided by the principle of purposive sampling, which emphasizes the deliberate selection of participants who possess the knowledge, experiences, and perspectives

relevant to the research objectives. By carefully selecting villages, researchers can obtain rich, meaningful data that contribute to a deeper understanding of the research topic.

For this research, several factors are considered when determining which villages to include in the sample:



LOCATION

We divided the villages into distinct regions, namely **West**, **Central**, and **East**, as we recognize that socioeconomic factors, cultural practices, and geographical characteristics often vary regionally. By including villages from each region, the research design can capture a diverse range of perspectives that may exist across different locations, thus ensuring a broader understanding of the research topic.



FINANCIAL ACCESS

We classify the villages into **fully served**, **underserved**, and **unserved** categories. Fully served means there is at least one bank agent or ATM in the village, underserved means that there is no bank agent or ATM in the village, but it is easy to reach, and unserved means that there is bank agent or ATM in the village, and it is difficult to reach.



INTERNET ACCESS

By categorizing villages into **connected communities**, which refers to those with internet access, and **disconnected communities**, or those without internet access, we can explore the potential influence of digital connectivity on the research topic. The distinction between connected and disconnected communities allows researchers to investigate how access to information, communication, and economic opportunities via the internet may affect individuals' perspectives and financial behaviors.

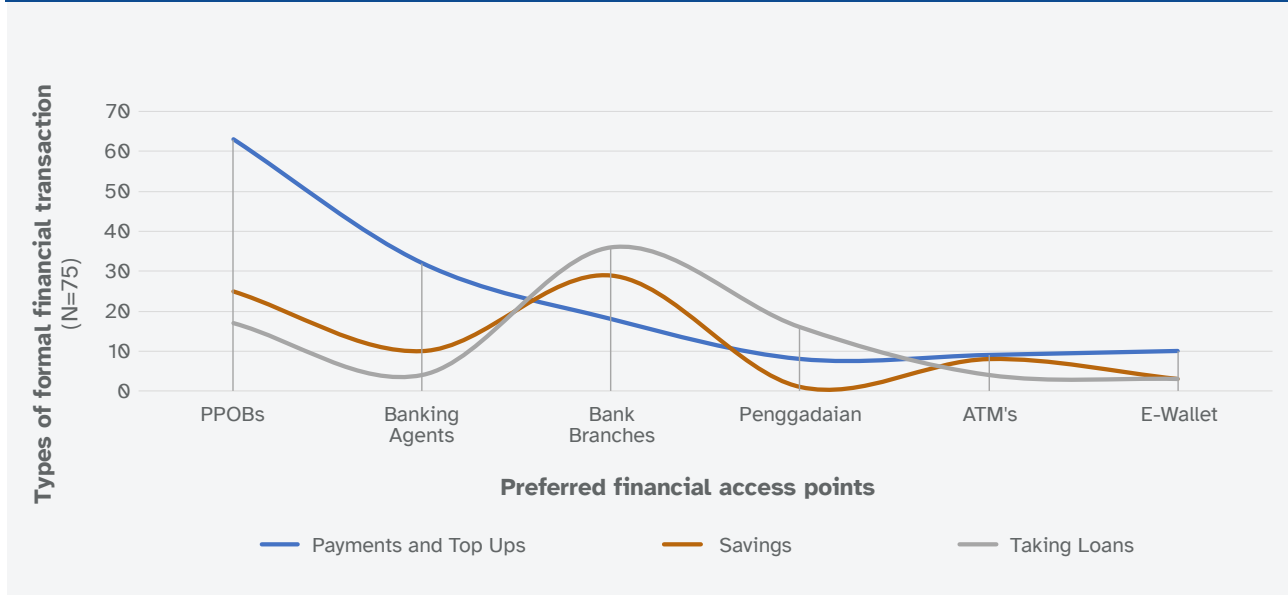


Appendix C: Identifying Indicators to Map Financially Underserved and Unserved Rural Women

To select a proxy for distance from financial services, we first had to identify which financial services were of greatest interest (e.g., saving money, taking loans, conducting payment transactions). Overall, rural women’s formal financial transactions appear to be mostly driven by Over-the-Counter (OTC) payments and top-ups, followed by savings and taking loans. For OTC transactions, Payment Point Online Banks (PPOBs), such as PT Pos, Indomaret, and Alfamart, as well as banking agents, seem to be preferable

access point for rural customers.²¹ Of those who save and/or take loans, bank branches, Pegadaian, and PPOBs are their preferred access points (see Figure 9). Using these insights, we mapped the growth of bank branches, ATMs, Pegadaian, and PT Pos access points. We then calculated an index that reflects the number of financial service points in a specific area relative to its population size (container method), namely service density ratio (see Figure 3, Figure 10, and Figure 11).

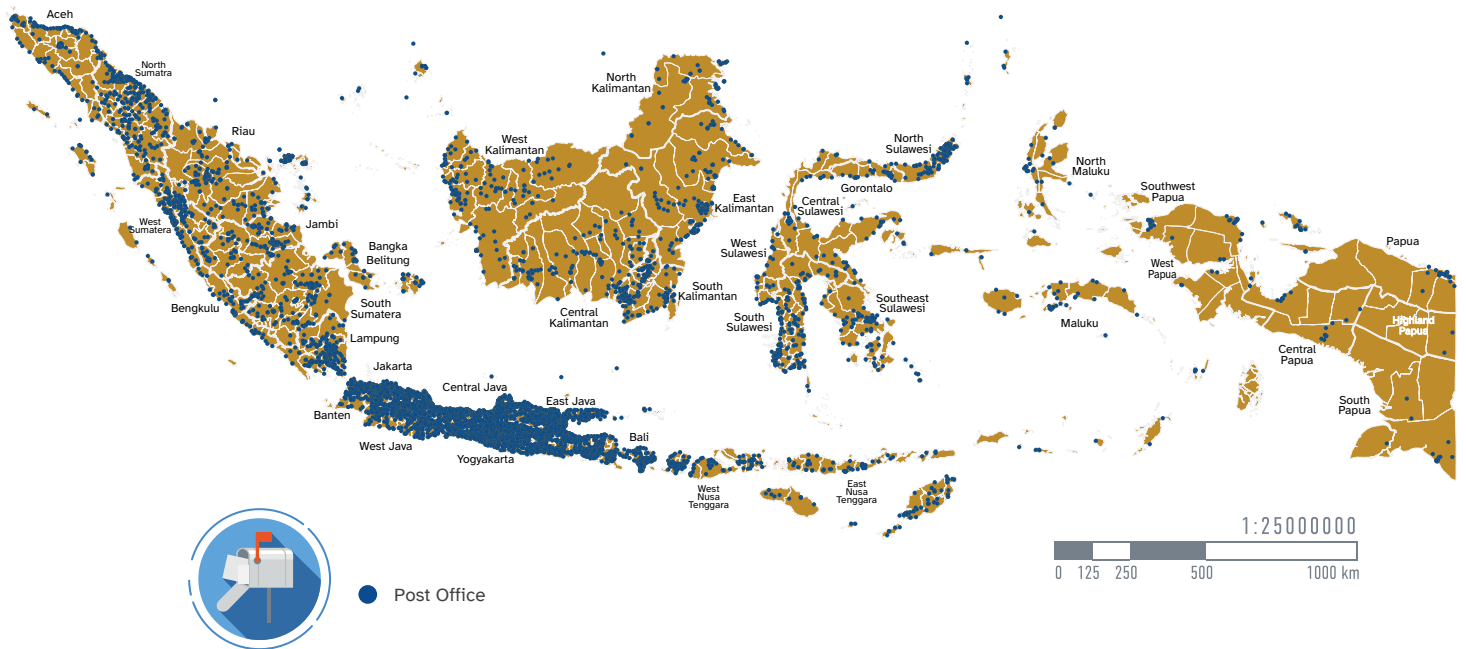
FIGURE 9. PREFERRED FINANCIAL ACCESS POINTS



Source: Author interviews with women customers in sampling areas. N=75. Respondents were asked, “What formal financial transactions you mostly do?” and “Where do you usually go to for conducting such transactions?”. Interviews relied on participants without prompts directing their answers.

21. **Payment Point Online Bank (PPOB)** is an online payment service system commonly operated by utility providers (electricity/ water providers, mobile network operators) in cooperation with banking institutions. In recent years, fintech and e-commerce startups have begun to provide similar systems as well. **Indomaret** and **Alfamart** are two of the largest convenience store chains in Indonesia. While their primary focus is on retail and providing a range of daily necessities, they have expanded to include various financial services, including purchase and bill payments, by acting as OTC payment collection points for online payments. **PT Pos Indonesia**, often referred to simply as PT Pos, is the state-owned postal service company in Indonesia. It operates as a government-owned corporation providing postal, courier, and financial services. The government of Indonesia has at times utilized the reach of PT Pos Indonesia in the implementation of various social welfare programs and financial inclusion initiatives. This includes disbursing subsidies and benefits to eligible individuals in rural areas. **Pegadaian**, officially known as PT Pegadaian (Persero), operates as a non-bank financial institution and is tasked with facilitating access to finance (such as providing pawnshop services and collateral-based lending), as well as gold-savings services.

FIGURE 10. DISTRIBUTION OF PT POSTAL SERVICE AND ONLINE PAYMENT SERVICES ACROSS INDONESIA, THROUGH 2022



Source: The latest information on pawnshops was gathered from the most recent data from the PT Pos in 2023. The specific locations were determined using the complete addresses of these institutions.

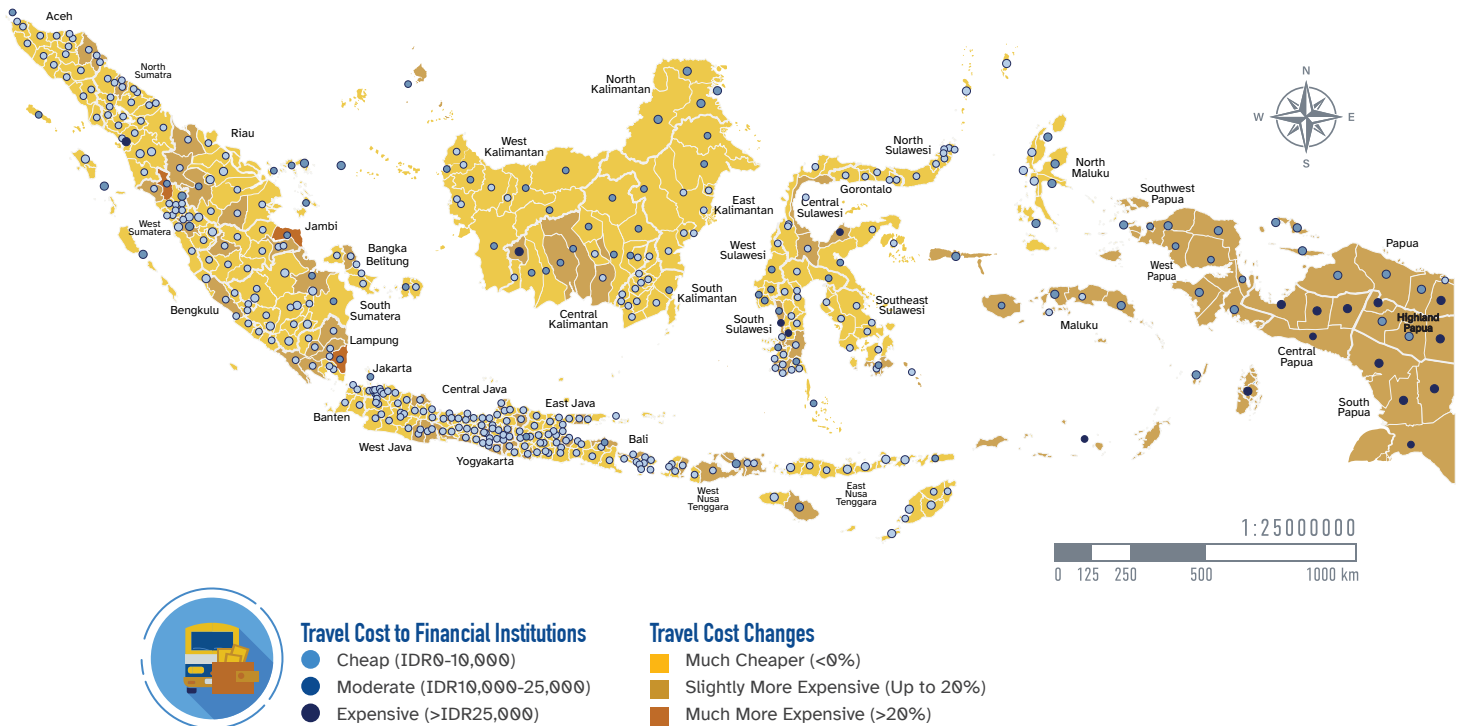
FIGURE 11. DISTRIBUTION OF PT PEGADAIAN SERVING GOLD SAVINGS AND PAWNING SERVICES IN INDONESIA, THROUGH 2022



Source: The data on Pegadaian branch locations was gathered from its 2023 list that is publicly available. The specific locations were determined using the complete addresses of these institutions. PT Pegadaian is a well-known and largest state-owned pawnshop service provider.

Appendix D: Additional Figures

FIGURE 12. ESTIMATED TRAVEL COSTS TO THE NEAREST FINANCIAL INSTITUTIONS, 2018-2022



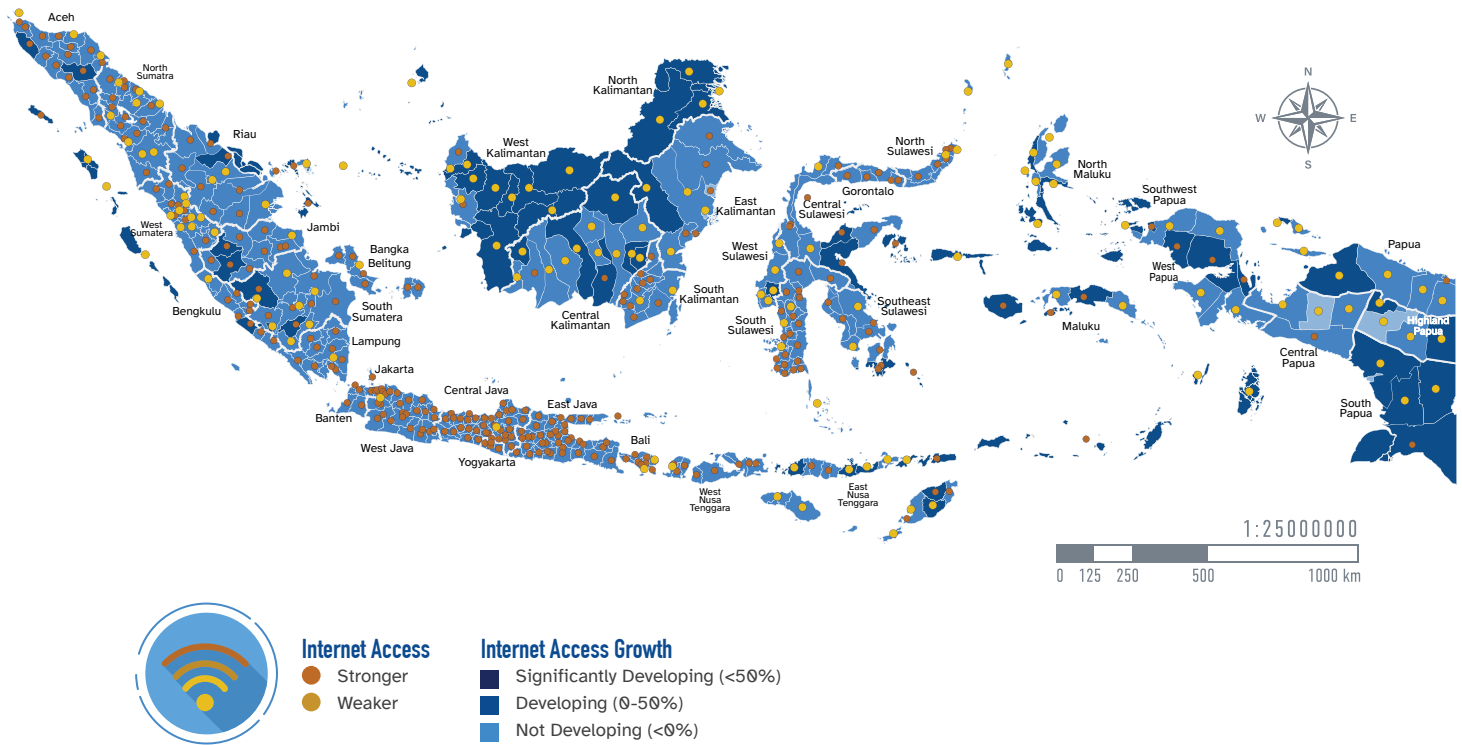
Source: Cost of traveling refers to data from the Podes data for the year 2022. The map classifies travel costs into three tiers: IDR0-10,000 for cheap travel cost, IDR10,000-25,000 for moderate, and >IDR25,000 for expensive travel costs. Changes in travel cost (in percentage) are estimated by comparing data from the years 2018 and 2022. The travel cost is estimated by calculating the distance to the financial location in kilometers. For each kilometer, it is multiplied by IDR500, assuming 1 liter of gasoline covers a distance of 20 kilometers and is priced at IDR10,000 per liter. This estimation is based on the forecasted fuel prices, particularly pertalite, which is the most commonly used by the community, especially in rural areas. In many rural areas in Indonesia, public transportation is inadequate, leading many residents to use motorcycles to reach financial service locations.

How Women in West and East Part of Indonesia Access Financial Service Points?

In the context of Saparua Island (Central Maluku) and Rumpin (West Java), the diverse modes of transportation available to women significantly shape their ability to access financial centers and engage in economic activities. In Saparua, women fishers and traders benefit from a variety of transportation options, such as "ojek" and "angkot." A woman fish trader's multi-mode journey serves as an illustrative example, showcasing how accessible transportation positively impacts women's economic participation and creates a favorable scenario for accessing financial institutions.

Conversely, in Rumpin, the high ownership of motorcycles and even cars among women emerges as a key facilitator of mobility for both unpaid care work and income-generating activities. The prevalence of personal vehicles is driven by the lack of reliable public transportation, underscoring the vital role of accessible transportation options in empowering women economically. These regional examples emphasize the intricate relationship between transportation modes, women's mobility, and their ability to engage with financial services, shedding light on the importance of tailored transportation solutions for fostering inclusive financial access.

FIGURE 13. INTERNET ACCESS SPEED LEVELS, 2018–2022



Source: The level of internet access speed refers to 2022 data from Podes (national socioeconomic survey). The classification of stronger and weaker internet access corresponds to above- and below-average internet access scores, which are determined by evaluating various levels of access, including 4G/LTE, 3G, 2G, and areas with no signal. Changes in the quality of internet access (in percent) are determined by comparing data from the years 2018 and 2022.

FIGURE 14. PROPOSED COLLABORATIVE INTERVENTIONS ACROSS MULTIPLE STAKEHOLDERS

	Intervention	Primary Actors		Supporting Actors	Goals
Supply Side	Estimate the impact of services	Financial Service Providers	Bank, fintech, insurance providers	Universities	Long-term
	Customer capacity building	Financial Service Providers	Bank, fintech, insurance providers	Financial Services Authority and local government, e-commerce providers	Long-term
	Improve product suitability	Financial Service Providers	Bank, fintech, insurance providers	Financial Services Authority, local government, universities, Civil Society Organizations	Long-term
	Promote innovative credit scoring	Financial Service Providers	Bank, fintech, insurance providers	Financial Services Authority, universities	Short-term
	Implement digital solutions	Financial Service Providers	Bank, fintech, insurance providers	Technology providers, Ministry of Communications and Informatics	Short-term
	Ensure that their efforts align with public institutions	Financial Service Providers	Bank, fintech, insurance providers	Financial Services Authority, Bank of Indonesia	Short-term
Demand Side	Investing in public services and infrastructure	Government	Relevant ministries (e.g., Ministry of Communications and Informatics, Public Works, and Finance)	Local government, Financial Service Providers	Short-term
	Development of inclusive policy and clear roadmap strategy	Government	Financial Services Authority, local government	Local government, Financial Service Providers, universities, Civil Society Organizations	Long-term
	Provision of incentive and institutional support	Government	Relevant ministries (e.g., Ministry of Finance, Coordinating Ministry for Economic Affairs)	Local government, Financial Service Providers	Medium-term
	Facilitate collaboration across stakeholders	Government	Financial Services Authority, local government	Local government, Financial Service Providers, Civil Society Organizations, Universities	Long-term
	Promote financial education	Government	Ministry of Education, Culture, Research, and Technology	Local government, Financial Service Providers, universities, Civil Society Organizations	Long-term
	Support data collection with gender segregation	Government	Central Statistics Agency	Local government, Financial Services Authority, Bank of Indonesia, Financial Service Providers, universities, Civil Society Organizations	Short-term
	Development of financial service models	Social institutions	Universities	Local government, Financial Service Providers, universities, Civil Society Organizations, Financial Services Authority	Long-term
	Expand advocacy issues such as climate change adaptation, climate insurance, women's economic empowerment, and more	Social institutions	Civil Society Organizations	Local government, Financial Service Providers, universities, Civil Society Organizations, Financial Services Authority	Short-term



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