GENDER INCLUSIVE FINANCE MAPPING PROJECT

LANDSCAPE REPORT

SPECIAL REPORT

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This special report is a product of AFI's Gender Inclusive Finance workstream.

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Cover photo: A women market seller in Mzuzu, Malawi (Alan Bramley / Alamy Stock Photo)

EXECUTIVE SUMMARY

This report is an output of the Gender Inclusive Finance Mapping project, which was designed to increase the understanding of AFI members on both the barriers and enablers of gender inclusive finance. The project's goal is to help national financial regulators and policymakers identify highly specific and concrete actions that will advance gender inclusive finance in their jurisdictions.

The objective of this report is to map the state of women's financial inclusion across the AFI network to provide an assessment of the key financial policy and regulatory enablers needed at a national level.[1] This evidence is expected to support members in developing a more conducive environment for increasing women's financial inclusion.

Gender inclusive finance (GIF) is a cross-cutting policy area that focuses on policy and regulatory approaches and interventions aimed at ensuring that all people, regardless of gender identity or expression, have access to affordable, quality formal financial services and products that are delivered in a responsible and sustainable manner.[2] Women's financial inclusion is, therefore, typically understood to mean women and women-owned or led micro, small and medium sized enterprises (WMSMEs) having equitable access to facilitate their financial lives.[3]

Despite the progress made in recent years in increasing women's financial inclusion and narrowing the gender gap that exists between women and men in accessing financial products, globally, more than 760 million women are still left financially excluded.[4]

1 The report maps the state of financial inclusion across the majority of the AFI network and not the entire network due to data availability.

2 Alliance for Financial Inclusion. 2022. Words Matter, AFI's Financial Inclusion Dictionary. Available at: https://www.afi-global.org/wp-content/uploads/2022/11/Words-Matter-AFIs-Financial-Inclusion-Dictionary_2022_isbn.pdf

3 Women-owned MSMEs (WMSMEs): micro, small, and medium enterprises owned, run, or managed by a woman or more than one woman. Most countries lack national definitions, and there is currently no global definition. The terms ownership, control, and management are frequently used interchangeably, despite having slightly different meanings. From: Alliance for Financial Inclusion. 2022. Words Matter, AFI's Financial Inclusion Dictionary. Available at: https://www.afi-global.org/wp-content/uploads/2022/11/Words-Matter-AFIs-Financial-Inclusion-Dictionary_2022_isbn.pdf

4 Calculated on the basis of the UN Population Division's Population Prospects: 2019 Revision for ages 15 and above with Global Findex 2021 data (26 percent exclusion for women and 21.7 percent for men, equivalent to 633.5 million excluded men).

Women face several barriers in accessing and using quality financial products and services that meet their lifecycle needs. These barriers are multidimensional and span four broad categories: regulatory and infrastructure barriers, supply side constraints on the part of financial service providers, demand-side constraints on the part of women themselves, and societal and cultural barriers.[5] Regulators have an important role to play in supporting women's financial inclusion either by directly addressing or influencing these barriers.

Sex-disaggregated data — data broken down by sex — is critical to track women's financial inclusion and can be effectively utilized to catalyze action on the part of policymakers, financial service providers, development organizations, as well as the wider global community. The data point most used to describe financial inclusion is account ownership at a financial institution such as a bank or mobile money provider.[6] This data point was used as part of this research to measure women's financial inclusion; specifically, 2021 Findex data on women's account ownership was mapped against levels of economic development using 2019 data on GNI per capita for 41 AFI member jurisdictions for which data was available.[7] This resulted in the grouping of the 41 jurisdictions into five categories according to their degree of progress on women's financial inclusion.

As the next step, the research sought to identify enabling factors for women's financial inclusion by developing a framework that considered three enabling elements:

- Policies, regulations, and government engagement, and financial access, usage, and infrastructure
- ICT and ID infrastructure
- The broader environment of women's economic participation, inclusion, and entrepreneurship

To present a comprehensive picture of these three elements, a total of 100 indicators were selected and country profile data sets were developed for the 41 AFI member jurisdictions. Analysis was run using these indicators to determine those enabling factors with the greatest impact on women's financial inclusion.

5 Alliance for Financial Inclusion. 2022. Integrating Gender and Women's Financial Inclusion into National Strategies (V.2.). Available at: https://www.afi-global.org/publications/guideline-note-27-integrating-gender-and-womens-financial-inclusion-into-national-strategies/

6 Account ownership is generally comparable across countries, whereas other financial products or services are more likely to be defined by terms or requirements that vary by market.

7 For GNI per capita (Atlas method, current US dollars), data was selected from 2019, the last full pre-COVID year to filter out the sudden volatility caused by the pandemic.

Findings indicated that the three main enablers of women's financial inclusion are (in order or impact):

1. Making and receiving digital payments (usage).
2. Mobile phone usage and internet access (access).
3. Equitable social norms and a gender-sensitive legal environment.

The 41 countries under the analysis were categorized through a principal component analysis (PCA) and validated through a discriminant analysis technique into five groups or categories with clear differences (refer to Annex 3). An overview of each group, along with specific drivers and constraints for women's financial inclusion as well as recommendations for policymakers, are outlined below.

FIVE CATEGORIES OF PROGRESS ON WOMEN'S FINANCIAL INCLUSION

Group 1:

ACCELERATED PROGRESS driven by digital payments

Average of 90% women's account ownership; 0% gender gap;

China, Malaysia, Mongolia, Russian Federation, South Africa, Sri Lanka

Group 2:

ACCELERATED PROGRESS driven by mobile money

Average of 57% women's account ownership; 10% gender gap;

Ghana, Kenya, Liberia, Namibia, Senegal, Uganda, Zimbabwe

Group 3:

PERFORMING AS EXPECTED

Average of 47% women's account ownership; 11% gender gap;

Armenia, Bangladesh, Ecuador, Malawi, Mozambique, Paraguay, Peru, Philippines, Tanzania

Group 4:

CONSTRAINED PROGRESS due to gaps in education and regulatory infrastructure

Average of 30% women's account ownership; 15% gender gap;

Cambodia, Côte d'Ivoire, El Salvador, Guinea, Nigeria, Sierra Leone, Uzbekistan

Group 5:

CONSTRAINED PROGRESS due to restrictive social norms and an environment that is not yet conducive for women's economic participation

Average of 25% women's account ownership; 15% gender gap;

Egypt, Iraq, Jordan, Morocco, Pakistan, Palestine, Tunisia

AFI member jurisdictions in Group 1 have accelerated the pace of women's financial inclusion, helping them achieve near universal inclusion. Here, progress is driven by a high level of activity in digital payments. Within this group, little remains to be done in terms of increasing access for women; instead, there is an opportunity to shift to deepening women's use of quality financial products and services developed to meet their lifecycle needs. This shift can be made through efforts to increase women's financial literacy, augment engagement and ecosystem collaboration, and by incentivizing innovation on new business models that encourage product and service uptake by women.

AFI member jurisdictions in Group 2 have also accelerated the pace of women's financial inclusion through high digital payment usage rates. In this group, the digital payments activity is driven by mobile money account ownership and remittance transfers. Within this group, there are opportunities to increase the number of women who own accounts, narrowing the gender gaps in ownership and usage, while improving women's financial health. These barriers can be tackled by embedding financial education for women into national financial inclusion strategies, expanding the focus of gender inclusive policymaking to grow the range of financial services for women, encouraging the reporting of segmented sex-disaggregated data by financial service providers and analyzing this data, and supporting policy prescriptions that expand digital infrastructure and increase women's access to mobile technologies.

AFI members in Group 3 are performing as expected, based on the mapping of women's financial inclusion against levels of development; however, there is room for improvement. To accelerate the pace of women's financial inclusion, Group 3 jurisdictions can work to enact a national women's financial inclusion strategy, if it is not already in place, and boost internal capacity for its implementation. Additionally, engaging with peer regulators from AFI member jurisdictions at similar development stages and social contexts can help group members leverage insights from other markets in building and implementing successful initiatives.

Progress on women's financial inclusion for AFI member countries in Group 4 is constrained because of gaps in ID and ICT infrastructure and women's educational attainment. While national financial inclusion strategies are in place, Group 4 regulators have not implemented guidelines for digital financial services or FinTech-focused efforts, which could help drive financial inclusion progress, as the experiences of Groups 1 and 2 demonstrate. Access to national IDs, mobile phones, and internet are major constraints. Here, regulators can provide support via the following efforts: establish or strengthen overarching national strategies to support women's financial inclusion; implement mobile money regulation and policies to support women's access to mobile technologies; support the transition to digital government-to-person (G2P) payments; enable electronic know-your-customer processes; facilitate increased uptake in national ID programs; and advocate for education and economic policy mandates that boost the educational attainment of young women.

The significant economic and legal barriers faced by women in AFI member Group 5 jurisdictions are the primary reasons for low levels of women's financial inclusion among these members. These constraints include low levels of women's labor force participation, legal restrictions and social conventions on women's mobility, marriage and divorce, and asset control and ownership. Here, regulators can focus on driving inclusive digital transformation as outlined above for Group 4, but they would also benefit from additional efforts. These include using widely available supply and demand-side sex-disaggregated data to identify insights to inform future policy design, encouraging financial service providers to develop products that meet women where they are, and enacting policies to support WMSME growth, such as incentivizing increased access to products and services and establishing alternative credit approval processes. Group 5 jurisdictions must also focus on influencing broader legal and societal change that could increase women's economic participation. Potential efforts include reforming workplace policies to address constraints to women's employment, addressing legal barriers to asset and land ownership, prioritizing programs that expand women's access to digital technologies, supporting initiatives that enable girls to stay in school, and participating in programs that expose young women to a wider range of career choices and small business ownership opportunities outside of the home.

Financial regulators have a critical role in expanding women's financial inclusion, whether through direct action to address the constraints women face and to promote initiatives that drive financial product and service availability, uptake, and usage, or by influencing legal and societal contexts to support women's economic participation. In addition to the specific recommendations provided for the different groups as outlined above, regulators can:

- Use the framework developed for this research and related indicators as a self-assessment tool to understand gaps in the enabling environment for women's financial inclusion.
- Use the report as an advocacy tool with non-financial sector regulators.
- Set up multi-sectoral committees for women's financial inclusion policy implementation.
- Improve sex-disaggregated data collection at both the public and private sector levels.
- Learn from jurisdictions demonstrating accelerated women's financial inclusion on specific measures undertaken to advance women's financial inclusion and address challenges in the broader environment. These measures include mandated digitization of wages, centrally administered digital payments, and innovations in mobile banking that effectively address limitations in ICT infrastructure and educational attainment.
- Promote de-risking mechanisms to incentivize the provision of holistic women's financial and non-financial service offerings, as well as to help address other development challenges that disproportionately impact women, such as climate change.

INTRODUCTION

Woman in her shop in Kompong Pluk, a village of stilt houses near Siem Reap Cambodia near Angkor Wat. (Yvette Cardozo / Alamy Stock Photo)

OBJECTIVE

The objective of this report is to map the state of women's financial inclusion across the AFI network and to provide an assessment of the key financial policy and regulatory enablers needed at a national level.[8] This evidence will then be available to support members in developing a more conducive environment for increasing women's financial inclusion. It builds on **Policy Frameworks to Support Women's Financial Inclusion**,[9] produced by AFI in 2016, which analyzed the efforts of policymakers and central bankers in different countries to fine-tune an enabling environment for the financial inclusion of women. The 2016 report identified seven policy measures[10] with the potential to have a major impact on women's financial inclusion and served as the foundation of the Denarau Action Plan (DAP) developed and adopted by AFI members at the 2016 AFI Global Policy Forum in Fiji. These policy areas and the DAP have helped inform the research phase of this project. Since then, the members of AFI's seven working groups have provided inputs to the AFI Management Unit which has published close to 60 publications that guide financial policy and regulatory efforts on gender inclusive finance. These publications range from special reports on new and emerging topics that distil global trends and present early-stage perspectives, guideline notes and toolkits that present a deep theoretical understanding of technical topics and offer practical evidence and policy models that codify tested and evaluated good policy practice from across the network.

Building on this guidance, members have been making public declarations on their financial inclusion targets through the Maya Declaration Platform. There are currently 900 targets overall with 82 focused on women's financial inclusion. Members are also active in taking the knowledge developed in the network and developing and then implementing practical policy changes across their jurisdictions. Since 2011, over 90 member institutions in the AFI network reported nearly 1,000 policy changes, 68 of which incorporated women's financial inclusion. Building on these publications and the policy changes made by members, this report aims to help financial regulators and policymakers identify successful across the AFI network, remaining barriers to women's financial inclusion, and highly specific and concrete actions that can be taken to advance women's financial inclusion in member countries.

TARGET AUDIENCES

While the report provides financial regulators and policymakers with insights into actions they can take to advance women's financial inclusion in their respective jurisdictions, it is meant for a global audience interested in understanding the current state of and factors contributing to gender inclusive finance. Additionally, the analytical framework developed from this research may be adapted by stakeholders beyond financial regulators and policymakers, who are interested in advancing gender inclusive finance and women's financial inclusion within their own spheres of influence.

Woman owned artisanal bread shop, LArtisa, in hip La Condesa area, Mexico City, Mexico. (Cathyrose Melloan / Alamy Stock Photo)

8 The report maps the state of financial inclusion across the majority of the AFI network and not the entire network due to data availability.

9 Alliance for Financial Inclusion. 2016. Policy Frameworks to Support Women's Financial Inclusion. Available at: https://www.afi-global.org/wp-content/uploads/publications/2016-08/2016-02-womenfi.1_0.pdf

10 These policy areas were: 1. A greater focus on the value proposition of women's financial inclusion, with explicit policy objectives and quantitative targets, can lead to transparent and inclusive policies for women; 2. Collecting financial data disaggregated by gender and conducting policy related research leads to more informed policy development; 3. Reforms to legal and regulatory frameworks can create space for innovation that supports greater financial inclusion for women; 4. The development of financial infrastructure is a critically important part of implementing sound policy; 5. Refining and strengthening financial consumer protection regulation addresses issues of concern to women clients, balancing protection with expanded outreach; 6. Financial education and financial literacy programs for women are a critical investment in women's financial inclusion; 7. Tackling legislation and regulations that address the social norms constraining women's financial inclusion which are beyond the scope of the financial sector.

UNDERSTANDING GENDER INCLUSIVE FINANCE (GIF)

Woman selling bread at Siab Bazaar in the center of Samarkand, Uzbekistan. (Tofino/ Alamy Stock Photo)

KEY PRINCIPLES

Financial inclusion is defined by AFI as "Access to and regular usage of quality financial services through payment infrastructures to manage cash flows and mitigate shocks. Such financial services are delivered by formal providers through a range of services with dignity and fairness."[11]

Gender inclusive finance is a cross-cutting policy area that focuses on policy and regulatory approaches and interventions aimed at ensuring that all people, regardless of gender identity or expression, have access to affordable, quality formal financial services and products that are delivered in a responsible and sustainable manner.[12]

Women's financial inclusion is, therefore, typically understood to mean that women and women-owned or led businesses have equitable access to financial services that facilitate their financial lives.

Women's financial inclusion is not a destination but rather an enabler that is critical to women's economic empowerment — the process by which women and girls gain the skills, resources, and opportunities to access and compete equitably in markets, and the agency to control and benefit from economic gains.[13] Empowering women economically advances progress toward meeting the 2030 Agenda for Sustainable Development and achieving the Sustainable Development Goals, and boosts income-generating activities, economic productivity, and positive outcomes for individual countries.[14] It allows women greater control over their lives and is linked to investments in their health and education, as well as improved household dynamics and shared decision-making in the home.[15]

Achieving financial inclusion for women is imperative not only for women themselves but also for their families, communities, and national economies. The African Development Bank has noted that when women are empowered, "they typically reinvest up to 90 percent of their income in the education, health, and nutrition of their families and communities,

11 Alliance for Financial Inclusion. 2022. Words Matter, AFI's Financial Inclusion Dictionary. Available at: https://www.afi-global.org/wp-content/uploads/2022/11/Words-Matter-AFIs-Financial-Inclusion-Dictionary_2022_isbn.pdf

12 Ibid.

13 Bill and Melinda Gates Foundation. 2019. Equal is Greater. Available at: https://www.gatesfoundation.org/equal-is-greater/

14 UN Women. 2018. Facts and Figures: Economic Empowerment. Available at: https://unwomen.org/en/what-we-do/economic-empowerment/facts-and-figures

15 Global Partnership for Financial Inclusion. 2020. Advancing Women's Digital Financial Inclusion. Available at: https://www.gpfi.org/sites/gpfi/files/sites/default/files/saudig20_women.pdf

Small artisan chocolate business owner, San Cristobal de Las Casas, Chiapas, Mexico. (Megapress / Alamy Stock Photo)

compared to up to 40 percent for men."[16] The financial inclusion of women can also support increased household income, as demonstrated by research conducted by the International Labour Organization which indicates that women tend to contribute larger portions of their income to household consumption than their male counterparts,[17] and improved household welfare, particularly when women have access to savings.[18]

The COVID-19 pandemic also highlighted another important impact, which is that women's financial inclusion can lead to reduced vulnerability to and greater resiliency to shocks for women and their families. Access to financial products and services helps to facilitate financial transactions critical to recovery, and these include cash transfers from government, remittance transfers from family and friends, credit, and savings.[19] Similarly, access to financial resources can enable climate resilience among women, who are presently disproportionately affected by climate change and environmental degradation.[20]

16 Asian Development Bank. Why AFAWA? Available at: https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/afawa-affirmative-finance-action-for-women-in-africa/why-afawa

17 International Labour Organization. 2022. Gender and Financial Inclusion. Available at: https://www.ilo.org/empent/areas/social-finance/WCMS_737729/lang--en/index.htm

18 G20 Insights. 2018. Updated 2020. Financial Inclusion for Women: A Way Forward. Available at: https://www.g20-insights.org/policy_briefs/financial-inclusion-for-women-a-way-forward/

19 Asian Development Bank. 2022. Financial Instruments to Strengthen Women's Economic Resilience to Climate Change and Disaster Risks. Available at: https://reliefweb.int/report/world/financial-instruments-strengthen-womens-economic-resilience-climate-change-and-disaster-risks

20 See https://issuu.com/afi-global/docs/towards_an_inclusive_green_future?fr=sODhiNzE1MDA4Mw for more information.

COMMON BARRIERS

The barriers faced by women in their attempts to access financial products and services are multidimensional and span four broad categories: regulatory and infrastructure barriers, supply side constraints on the part of financial service providers, demand-side constraints on the part of women themselves, and societal and cultural barriers.[21]

Some of the main legal and regulatory barriers to women's financial inclusion include personal status laws (i.e. unequal recognition or rights related to personhood, marriage, spousal duties, parentage, inheritance, etc.); others include barriers around access to a passport or national identification card that make it more challenging for women to fulfill the know-your-customer (KYC) requirements needed to be onboarded by a financial service provider.[22] While laws typically do not restrict women from obtaining the necessary forms of identification, they may include additional steps, or a more complicated process for married women, that serve as a barrier to opening an account with a financial service provider.[23] There may also be social and cultural barriers that inhibit a woman from freely using her ID even after obtaining it.

Barriers related to physical and digital infrastructure can make it challenging for women to access financial service providers both in person and digitally. Underdeveloped physical infrastructure can mean long and difficult travel to a financial service provider or agent for women seeking to transact in person. Travel is disproportionately challenging for women, who may face safety implications if traveling alone and childcare implications if they have children who require oversight while they are in transit. Visiting a financial service provider also has cost implications for both the transportation required and any business lost by the woman taking time out from economically productive activities to make the visit.

For those seeking to transact via a mobile phone or other digital device, insufficient digital infrastructure can mean limited internet or cell phone coverage, making these kinds of transactions impossible or causing delays that counteract the convenience for which digital financial services have gained such traction across the globe. Women also tend to have lower levels of mobile phone ownership and usage of mobile internet; in low- and middle-income countries, women are seven percent less likely than men to own a mobile phone and 16 percent less likely to use mobile internet.[24]

When looking at each barrier in isolation, they may seem insignificant, but the reality for many women is that the barriers are intersectional and can compound the difficulties they face. For example, a rural woman with four children and a small business selling produce in an area that is unsafe outside her village is not likely to walk the five miles to the nearest branch, taking her children with her and risking their safety, just to bank her small weekly earnings. The intersectional nature of the difficulties women face means the barriers become too high, driving women to stay outside the formal financial system.

21 Alliance for Financial Inclusion. 2022. Integrating Gender and Women's Financial Inclusion into National Strategies (V.2.). Available at: https://www.afi-global.org/publications/guideline-note-27-integrating-gender-and-womens-financial-inclusion-into-national-strategies/

22 See https://www.afi-global.org/wp-content/uploads/publications/2018-11/AFI%20GSP_laundering_stg7.pdf for more information.

23 World Bank. 2014. Hidden Roadblocks: Structural Barriers that Limit Women's Financial Inclusion. Available at: https://blogs.worldbank.org/opendata/where-world-do-women-still-face-legal-barriers-own-and-administer-assets

24 See https://www.gsma.com/r/gender-gap/ for more information.

Woman at her small shop kiosk selling sweets and home made food, Township Lubuto near Ndola, Zambia. (Friedrich Stark / Alamy Stock Photo)

Supply side constraints often start with risk aversion on the part of financial service providers to serve an unfamiliar segment of the market or a management team that does not see a clear business case, frequently because they do not have relevant sex-disaggregated data to make informed decisions. Among financial service providers that see a business case or have another interest in serving women, other common constraints include products and distribution channels that are not designed with women in mind (i.e. loan products that require landed property as collateral, branch and agent locations that are too far from women's homes, and generic savings and deposit accounts that assume women and men have similar financial behaviors despite women being a heterogeneous group).

Women of different age groups and residing in different geographical locations (rural or urban) have different financial requirements during the different stages of their life cycles. A common practice of "pink-washing" products — a marketing and communications tactic that aims to appeal to women — ignores the unique financial behaviors and needs of various women's segments, instead offering a generic product with a new name or marketing images that are expected, but often fail, to appeal to women. Other marketing and communications shortfalls include not providing materials in a language that speaks to women's needs or capabilities or delivering messages in a language that is not widely understood by much of the population.

On the demand side, women who are not served by the financial sector often do not try to engage with it for reasons that are complex and multifaceted. Women sometimes choose not to approach formal financial service providers due to concerns around the real or perceived cost of financial products and services, or the requirements needed for access. Other demand side factors, such as limited financial or digital literacy and low awareness, in turn drive issues such as low confidence. Recent research by the IMF in 47 African countries demonstrates that women entrepreneurs in Africa are more likely than male entrepreneurs to self-select out of formal credit because of their own perceptions around their creditworthiness.[25] Lack of trust and feeling intimidated or patronized, depending on their level of financial literacy, are other reasons why women choose not to engage with formal financial service providers.[26]

Common societal and cultural barriers include beliefs about the role of women in society, their ownership of property, and their opportunity to become financially capable. These community beliefs manifest as actions that can limit women's ability to work productively (inside but especially outside the home), move freely outside the home, be paid for their labor, attain education, pledge collateral for a loan, and build self-confidence, in addition to affecting the amount of unpaid domestic care women are expected to provide and the size and diversity of their networks.[27] In some markets, these beliefs are codified into law, with the most common restrictions being on women's rights to own and administer assets or inherit property.[28] In other markets, legal restrictions on job types are also an issue; for example, in Jordan, women are prohibited from applying for jobs in specific sectors,[29] and in Nigeria, women are prohibited from working in industrial sectors at night.[30]

While each of these barriers alone can have a negative impact on a woman's economic opportunities, gender-based barriers are nearly always intersectional and plural, affected by several overlapping identities and experiences that can create complex prejudices or disadvantages.[31] In addition, when coupled with other factors such as living in a rural area, living with a disability, or being forcibly displaced, these barriers can have an insurmountable negative impact on women's financial lives and overall well-being. Just as the barriers are intersectional, developing and implementing effective solutions requires a wide range of stakeholders to work in collaboration. Regulatory agencies cannot resolve these issues alone but can tackle what is within their mandate and influence what is outside it.

25 International Monetary Fund. 2020. Access to Finance: Why Aren't Women Leaning In? Available at: https://www.imf.org/en/Publications/fandd/issues/2020/03/africa-gender-gap-access-to-finance-morsy

26 See https://www.womenandmoney.org.au/womens-experience-in-engaging-with-the-financial-sector/ for more information.

27 Toronto Centre. 2019. Removing the Barriers to Women's Financial Inclusion. Available at: https://res.torontocentre.org/guidedocs/Removing the Barriers to Women's Financial Inclusion.pdf

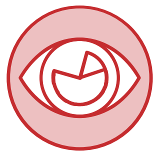
28 World Bank. 2019. Where in the world do women still face legal barriers to own and administer assets? Available at: https://blogs.worldbank.org/opendata/where-world-do-women-still-face-legal-barriers-own-and-administer-assets

29 ILO. 2022. Gender Equality and Decent Work in Jordan 2022. Available at: https://www.ilo.org/wcmsp5/groups/public/---arabstates/---ro-beirut/documents/publication/wcms_787222.pdf

30 World Bank. 2021. Women, Business, and the Law 2021. Economy Summary Nigeria. Available at: https://wbl.worldbank.org/content/dam/sites/wbl/documents/2021/02/2021.11.22_WBL_Economy_Summary_Nigeria.pdf

31 Adapted from the Oxford dictionary.

A summary of the barriers and examples to women's financial inclusion include:

REGULATORY AND INFRASTRUCTURE BARRIERS	SUPPLY-SIDE CONSTRAINTS	DEMAND-SIDE CONSTRAINTS	SOCIETAL AND CULTURAL BARRIERS
• Personal status laws • Access to an ID • Underdeveloped physical or digital infrastructure	• Risk aversion on the part of FSPs • Do not see a clear business case • Products or distribution channels not designed with women in mind • Language used does not speak to women	• Concerns about the cost of financial products or services • Challenges meeting requirements • Limited financial literacy or awareness • Low confidence	• Beliefs about the role of women in society, their ownership of property, and level of financial capability • Beliefs are sometimes codified into law (restrictions on property ownership, job types, etc.)
			

The barriers highlighted above interact across these four broad categories and culminate in limiting women's financial inclusion. For example, societal beliefs about women's roles in the home and family may limit a woman's mobility, and if infrastructure means that a financial service provider is far or difficult to visit, that woman will face challenges in reaching the provider. If the products and services are costly or do not meet her needs, she will not use them, and if she does find an appropriate product but is not confident that she understands the terms and conditions, she will not apply for it even though it may help her financially.

Underpinning all of this is the critical cross-cutting barrier of a lack of sex-disaggregated data. While various supply- and demand-side national and international data sources exist on financial inclusion (as outlined in the Women's Financial Inclusion Data section below), and these sources are expanding and improving with time, significant gaps remain in collecting and utilizing gender or sex-disaggregated data to address financial inclusion. Many regulators do not mandate that financial service providers report detailed sex-disaggregated data, and even when they do, there are often data quality issues due to imperfect or outdated data management systems. In cases where financial service providers are regulated by different authorities, this can lead to gaps in data availability and inconsistencies in what is reported by different types of institutions.

Importantly, data on women-owned or led businesses is notoriously difficult to find, and with women increasingly running their own businesses (one in three small, medium, or large enterprises worldwide is women-owned,[32] and women are overrepresented among microbusinesses across the globe), this leaves an important gap in understanding how well women business owners are (or are not) served by existing financial products and services. Frequently, there are no agreed national level definitions as to what constitutes a woman owned, woman-led, or woman-managed business, and even when definitions do exist, they are not always applied in practice. Across the 63 countries in the AFI network that we researched, 50 members are now collecting either supply or demand side sex-disaggregated data.

32 Halim, Daniel. 2020. Women entrepreneurs needed—stat! World Bank Data Blog. Available at: https://blogs.worldbank.org/en/opendata/women-entrepreneurs-needed-stat

WOMEN'S FINANCIAL INCLUSION DATA

Sex-disaggregated data — data broken down by sex — is needed to track women's financial inclusion and can be effectively utilized to catalyze action on the part of policymakers, financial service providers, and development organizations as well as the wider global community, especially at an aggregated level. For policymakers, sex-disaggregated data is critical for evidence-based policymaking, while for financial service providers, it highlights product and service adoption and usage gaps, offering critical insights into market opportunities, existing and new businesses cases, product design, and channel distribution. Providers who are particularly interested in deepening their footprint in the women's market can use sex-disaggregated data to design women's market strategies and tailored value propositions. It is also important to note that the women's market is not homogeneous and should be treated as distinct segments; for example, the needs of a rural mother with a micro business are very different from those of a single urban woman with a salaried job. Finally, development organizations can use sex-disaggregated data to better design interventions aimed at deepening women's financial inclusion and supporting their financial literacy and resilience.

The data point most used to describe financial inclusion is account ownership at a financial institution, such as a bank or mobile money provider. This is primarily because account ownership is generally comparable across countries, whereas other financial products or services are more likely to be defined by terms or requirements that vary by market (i.e. credit products differ greatly by term, interest rate, collateral requirements, etc.).[33] Additionally, access to an account is often a first step towards broader financial inclusion, thus access to an account serves as a gateway to usage of other (quality) financial products and services.[34]

Building on this definition, women's financial inclusion is most frequently defined by women's account ownership. For ten years, the gender gap in account ownership reported by the World Bank Global Findex Database across developing economies remained stuck at nine percentage points; for the first time since 2011, the 2021 Database demonstrated that this gap had fallen to six percentage points in 2021. This means that approximately 959 million women were financially included since the Findex started. And while this progress is long overdue and laudable, it means that globally, more than 760 million women are still financially excluded.[35]

33 Allen, Demirguc-Kunt, Klapper, And Martinez Perla. 2015. The Foundations of Financial Inclusion: Understanding Ownership and Use of Formal Accounts. Available at: https://pdf.sciencedirectassets.com/272388/1-s2.0-S1042957316X00046/1-s2.0-S1042957315000534/Franklin_Allen_Household_Finance_2016.pdf?X-Amz-Security-Token=IQoJb3JpZ2luX2VjEHoaCXVzLWVhc3QtMSJHMEUCIQDm%2ByNlnJBo1jsclskteHZpoBiAPs9h0W7WMotDikChaAIgSJoF06Yu

34 World Bank. n.d. Available at: https://www.worldbank.org/en/topic/financialinclusion/overview

35 Calculated on the basis of the UN Population Division's Population Prospects: 2019 Revision for ages 15 and above with Global Findex 2021 data (26 percent exclusion for women and 21.7 percent for men, equivalent to 633.5 million excluded men).

SEX-DISAGGREGATED VERSUS GENDER-DISAGGREGATED DATA

Sex-disaggregated data is defined as data collected separately for male and female individuals. Data is disaggregated by "sex" and not by "gender" because when data is collected, it is the biological differences, or the "sex", of a person that is captured. There are some jurisdictions where more than two sexes are recognized, and where if your gender changes, you can also change your sex, but this is not common across the network. Gender is the social and cultural construct of how men and women live their lives. In the context of financial inclusion policymaking, sex-disaggregated data can refer to either supply-side data collected from FSPs, or demand-side data collected through national surveys, for instance. For more information, see AFI's Guideline on Sex-Disaggregated Data Report Templates.

Market woman standing in front of her shop, jute bags full of onions at spice market. Dhaka, Bangladesh. (David Weyand / Alamy Stock Photo)


A customer uses smartphone to pay for her breakfast purchase with QR code. Shenzhen, China. (Yalan / Alamy Stock Photo)

Beyond women's account ownership, other data points pointing to women's financial inclusion that can be used to understand not only whether but how well women are being served by the formal financial sector include indicators around product and service usage, the quality of financial products and services available, and financial health. Examples are outlined below:

Product and Service Usage

- Dormancy of accounts
- Number of transactions per client by transaction type
- Percentage of clients transacting three or more times per month
- Account balances

Quality of Products and Services Available

- Number and type of complaints received
- Number and type of reported fraud incidents
- Share of failed transactions
- Share of active agents

Financial Health

- Share of accounts or number of clients with > three times the monthly minimum wage
- Share of accounts with overdrafts
- Share of failed debits due to insufficient funds

The most regularly referenced demand-side data source on financial inclusion is the World Bank Global Findex Database (Global Findex), which is widely cited by policymakers, researchers, and development professionals and also used to track progress toward the United Nations Sustainable Development Goals. Every three years since 2011, apart from a one-year delay in 2021 due to the COVID-19 pandemic, the database has collected and reported data on global access to financial services from payments to savings and borrowing. It allows for global and regional cross-country analysis with a sample that is nationally representative from across markets. The 2021 survey collected data from 123 countries, of which 41 are AFI members. Other widely recognized demand-side data sources include FinMark Trust's FinScope Survey and the Financial Inclusion Insight Surveys developed with support from the Bill and Melinda Gates Foundation.[36]

Demand-side data sources provide a view of the whole market, including informal practices, and are important for market sizing. Their limitations include time-lags, cost of collection and analysis, and sampling issues. In cases where methodology changes between data collections, comparing year-on-year data can become problematic. Multi-country demand-side data sets, such as the Global Findex also tend to have spotty information availability for smaller developing countries, resulting in more than forty AFI members still not being included in the surveys. This also means that at a global level, it is harder to get a full picture across the developing and emerging world as the data sets are not fully inclusive; instead, national level data can frequently provide a more comprehensive picture and is more frequently used by many AFI member jurisdictions.

36 CGAP. 2014. 10 Useful Data Sources for Measuring Financial Inclusion. Available at: https://www.cgap.org/blog/10-useful-data-sources-measuring-financial-inclusion

At the national level, demand side surveys collect data using a nationally representative sample (e.g. FinAccess Kenya). These national level surveys are typically much larger than the 1,000 to 1,500 sample size used by the Global Findex and can provide far more granular information that can be more fully disaggregated. These surveys, however, are not undertaken by all AFI member jurisdictions as they are very time consuming (often taking about a year to develop, administer, and analyze), and they tend to be very costly for most jurisdictions to administer. They generally use a different methodology from many of the global data sets, so while they may provide excellent national level information and demonstrate trends over time, they generally cannot be compared to one another, limiting the reach of work such as this where a comprehensive view of the entire landscape is desired.

Global level supply-side data sources include the International Monetary Fund's Financial Access Survey (FAS) and the World Bank's Global Payment Systems Survey.[37] AFI's own Core Set of Financial Inclusion Indicators developed by the Financial Inclusion Data Working Group are another example of supply-side data; in this case, the indicators are focused on access and usage.[38] Supply-side data tends to be more reflective of real-time financial product and service usage and can be more accurate than demand-side data in terms of behavior having actually taken place (rather than remembered or claimed); however, it also has limitations. The primary limitation is that this data is dependent on the ability of countries to capture, clean, and manage data from financial service providers, which requires making and enforcing mandatory reporting. For financial service providers, this often requires an upgrade to their data management systems and the capacity building of their personnel. It also requires clear communication with the regulator so all parties can understand what is needed, why it is needed, and how it will be used. Opportunities to review and enhance data collection and analysis processes should also be built into any activities.

37 Ibid.

38 Alliance for Financial Inclusion. 2019. The AFI Core Set Policy Model. Available at: https://www.afi-global.org/wp-content/uploads/2020/07/AFI_PM_Core-Set_FINAL_2020_digital.pdf

A woman buys food at Kibuye market, the largest open air market in East Africa. Kisumu, Kenya. (Kirill Niktin / Alamy Stock Photo).

RESEARCH FRAMEWORK AND METHODOLOGY

A woman working at a handicraft shop in Lima, Peru. (Jeffrey Isaac Greenberg 16+ / Alamy Stock Photo)

OBJECTIVES

The objectives of this research are twofold: to map the state of women's financial inclusion across the AFI network, and to identify the key enabling factors to women's financial inclusion under the purview of financial sector policymakers and regulators. To achieve these objectives, a research methodology and analytical framework were developed and consulted among experts, including members of the AFI network, AFI staff, stakeholder organizations, and external statistical experts.

FRAMEWORK

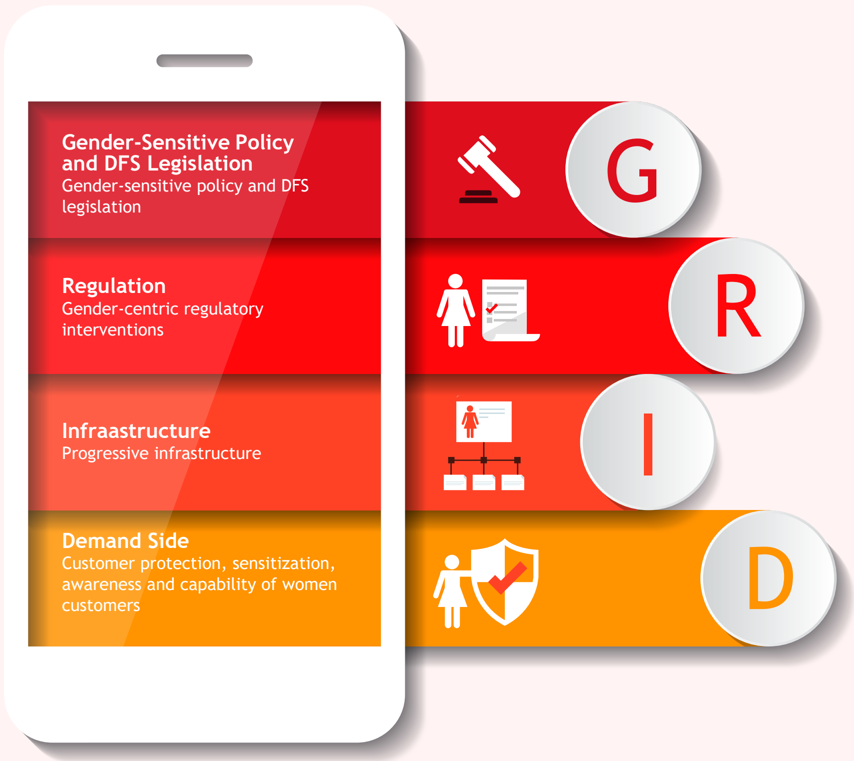
The global community is very interested in women's financial inclusion, and several stakeholders have already contributed to the body of knowledge in this area, including the drivers, barriers, and enablers. Their work needs to be recognized and built upon, but not duplicated. AFI has also undertaken considerable work on this topic in recent years. Therefore, the framework developed for this research builds on the previous work by AFI and others such as GIZ, FinEquity, and Data2x, all of which have developed frameworks for improving women's financial inclusion in the context of the broader environment for women's economic participation and empowerment. FinEquity's Measuring Women's Economic Empowerment in Financial Inclusion maps out different measurement frameworks for women's financial inclusion, including descriptions and how-to guides along with the main indicators for measurement and guidance on which audiences would find each framework most useful.[39]

AFI's Policy Framework for Women's Financial Inclusion Using Digital Financial Services (see figure 1 below) outlines four critical considerations to be taken by policymakers to advance the agenda of women's financial inclusion through digital financial services (DFS) usage: 1. gender sensitive policy and DFS legislation; 2. regulation; 3. infrastructure; and 4. demand side.[40]

39 FinEquity. 2021. Measuring Women's Economic Empowerment in Financial Inclusion. Available at: https://www.findevgateway.org/sites/default/files/publications/2021/FinEquity_EconomicEmpowerment_Final.pdf

40 Alliance for Financial Inclusion. 2019. Policy Framework for Women's Financial Inclusion Using Digital Financial Services. Available at: https://www.afi-global.org/wp-content/uploads/2019/10/AFI_DFS_Women-FI_AW_25.09.19_digital.pdf

FIGURE 1. POLICY FRAMEWORK FOR WOMEN'S FINANCIAL INCLUSION USING DIGITAL FINANCIAL SERVICES



In addition to the resources available on the publications sections of the AFI website, other organizations use case studies to support policymakers, regulators, and practitioners in their efforts to identify key enablers of women's financial inclusion applicable to their own markets; examples include the Global Partnership for Financial Inclusion's Advancing Women's Digital Financial Inclusion report[41] and GIZ's Women's Financial Inclusion Toolkit.[42]

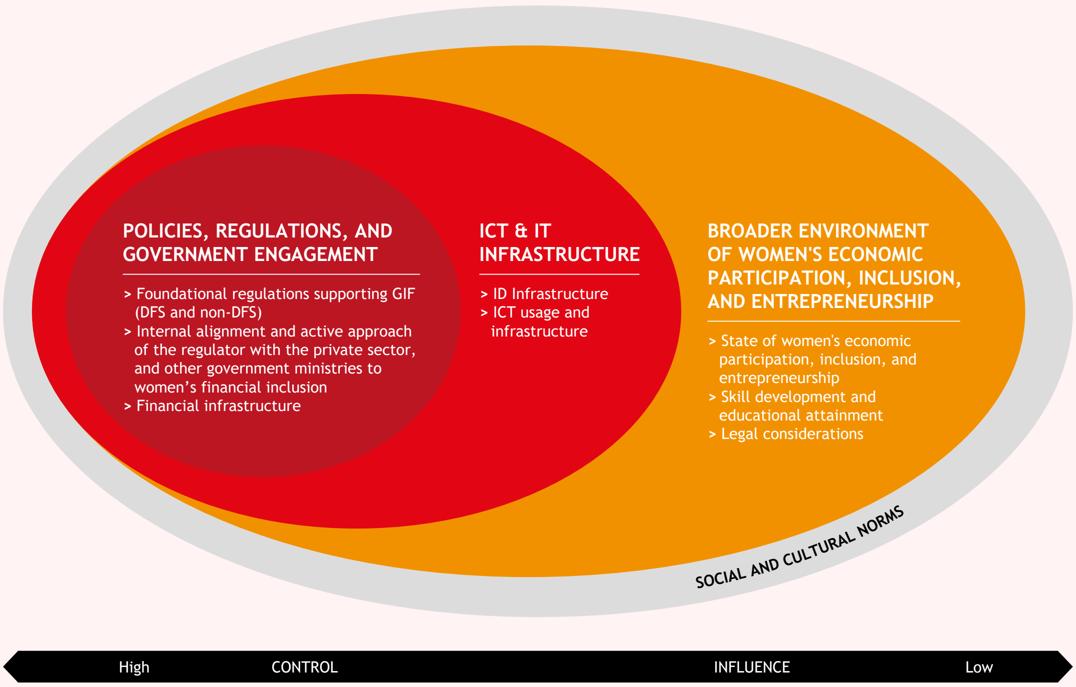
Building on these resources, the analytical framework developed for this research consists of three foundational elements or segments: policies, regulations, and government engagement; information communications technology (ICT) and identification (ID) infrastructure; and the broader environment of women's economic participation, inclusion, and entrepreneurship under the 'involved' environment of social and cultural norms in each AFI member jurisdiction (see figure 2 below).

The items on the left-hand side of the image are where financial regulators have the most control and strongest mandate. As you move right across the image, the regulators' control diminishes. On the far right of the image, regulators are only able to exert a general level of influence. First, on the left under the scope of regulators' mandates, **Policies, Regulations, and Government Engagement** considers whether and to what extent a financial ecosystem has foundational policy and regulations; the internal alignment of these policies and regulations; how much of an active approach the regulator takes with the private sector and other government ministries; and the financial infrastructure needed to support women's financial inclusion. Second, in the center of the image, **ICT and ID Infrastructure** seeks to identify whether and to what degree the market has the necessary technological foundations in place and existing infrastructure around personal data (such as national identification systems) to allow direct identification of the financial product or service user. Third, on the right of the image, the **Broader Environment of Women's Economic Participation, Inclusion, and Entrepreneurship** reflects how economically active and included women are; to what degree women's entrepreneurship exists and is supported; the levels of skills development and educational attainment present in the market; and what legal considerations support women's economic interactions.

41 Global Partnership for Financial Inclusion. 2020. Advancing Women's Digital Financial Inclusion. Available at: https://www.gpfi.org/sites/gpfi/files/sites/default/files/saudig20_women.pdf

42 GIZ. 2021. Women's Financial Inclusion Toolkit. Available at: https://www.giz.de/expertise/downloads/2021%20giz%20womens%20financial%20inclusion%20toolkit.pdf

FIGURE 2. MAIN ENABLERS OF WOMEN'S FINANCIAL INCLUSION, AND THE DEGREE OF REGULATORS' CONTROL AND INFLUENCE



Uzbek vendor woman selling vegetables in the market, in Margilan, Uzbekistan. (MehmetO / Alamy Stock Photo)

The framework is also encircled by a fourth element that influences all the other aspects: **social and cultural norms**, which can determine the enabling or effectiveness of all other elements within the framework. These norms are dependent upon a jurisdiction's specific context, so they differ across the AFI network. They provide the shell through which every aspect of the three elements of the framework manifests, and they can be either enablers or constraints depending on the specific jurisdiction.

An example would be the issue of land ownership for women. In some jurisdictions, the statutes provide for a woman to own or inherit land, which becomes her right, yet in practice, if her husband dies, the land she is entitled to is taken by other people in the family or community, causing her to lose her home and her source of income. Even if she can afford to go to court to claim her rights, the community would not accept her doing this. In such a situation, what is on paper becomes meaningless when it is applied to the lived experience of many women.

It is also important to note that social and cultural norms are dynamic and can change over time, presenting huge opportunities for positive change to be enacted not just through words on paper but through work with communities on the ground to educate and empower individuals and communities, allowing women to be full economic actors in society. Male community and religious leaders can be valuable allies for change and also instrumental is driving sustainable progress.

METHODOLOGY

Two sets of activities were conducted to achieve the objectives of this study: 1) mapping women's financial access in relation to the level of economic development for AFI member countries, and 2) using the above-outlined analytical framework to identify key factors enabling women's financial inclusion to understand such progress.

Recognizing **that a country's level of economic development can be an important predictive tool in understanding where that country is on its journey to women's financial inclusion, the research mapped women's financial access using 2021 Global Findex data on women's account ownership against levels of economic development using 2019 data on GNI per capita.** This is based on evidence that a country with greater resources is likely to have a more advanced enabling infrastructure and broader availability of financial products compared to peers with fewer resources.[43] Global institutions such as the International Monetary Fund, World Bank, and the Organisation for Economic Co-operation and Development commonly use GNI per capita to map countries for research purposes. The World Bank recognized it as a useful and easily available indicator that is used for their country income groupings, and is closely correlated with other, non-monetary quality of life measures, such as enrollment rates in school, life expectancy at birth, or the mortality rates of children.[44]

43 For example: Cicchiello, A.F., Kazemikhasragh, A., Monferrá, S. et al. 2021. Financial inclusion and development in the least developed countries in Asia and Africa. Journal of Innovation and Entrepreneurship. Available at: https://doi.org/10.1186/s13731-021-00190-4; Azimi MN. 2022. New insights into the impact of financial inclusion on economic growth: A global perspective. PLoS ONE. Available at: https://doi.org/10.1371/journal.pone.0277730

44 See https://datahelpdesk.worldbank.org/knowledgebase/articles/378831-why-use-gni-per-capita-to-classify-economies-into for more information.

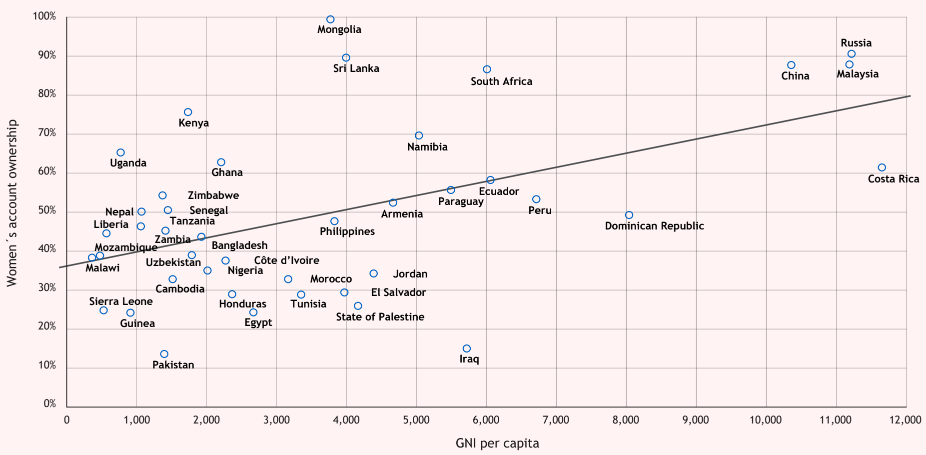
A NOTE ON DATA SELECTION

Global Findex data was selected for this analysis because it is an important global data set on financial inclusion and allows for the comparison of data over time given the availability of data for 2011, 2014, 2017, and 2021 for 41 AFI member jurisdictions. Global Findex data for 2021 was unavailable for eight member countries previously covered in 2017: Belarus, Democratic Republic of Congo, Haiti, Lesotho, Madagascar, Mauritania, Mexico, and Rwanda. These jurisdictions are, therefore, not a part of this analysis, but Mexico is covered by one of the deep dive case studies.

In addition, seven out of eight AFI member jurisdictions from the Pacific region are also not covered by the Global Findex, as well as 10 members jurisdictions from other regions. To ensure that learnings from the Pacific are included, deep dive case studies have been prepared on both Fiji and the Solomon Islands. For a detailed look at the list of active AFI members and the availability of demand and supply-side sex-disaggregated data, please refer to Annex 1.

Multiple regression analysis identified the expected value of women's account ownership for each of the AFI member jurisdictions for which 2021 Global Findex data was available and compared this to actual women's account ownership (see figure 3 below).

FIGURE 3. WOMEN'S FINANCIAL INCLUSION (ACCESS) IN RELATION TO THE LEVEL OF ECONOMIC DEVELOPMENT (GNI PER CAPITA)



The jurisdictions were then categorized as follows: those with actual women's account ownership within a 10 percent range (positive or negative) from the expected value were labelled "as expected", whereas jurisdictions where the gap is higher in a negative direction were labelled "constrained", and those where the gap is higher in a positive direction were labelled "accelerated". These findings are important, as a review of accelerated jurisdictions can provide examples of how to maximize women's financial access given the constrained resources of the financial regulator, while a deep dive into commonalities between constrained jurisdictions can help identify barriers to avoid or account for/mitigate through regulatory intervention. For the plotting and analysis, multiple indicators that correlated with women's account ownership were used and run — the matrices with these different indicators provided very similar results and groupings. We used the GNI per capita indicator, which showed a strong positive correlation to the women's account ownership index (for more details, please see Annex 3).

Once the analysis determined the actual performance of jurisdictions in women's access to finance relative to their expected performance, the research focused on understanding the contributing factors behind each jurisdiction's performance, particularly that of the outliers — those with accelerated or constrained growth. Five distinct groups emerged among jurisdictions from the comparison of the performance against the expected levels of women's financial access: two groups with accelerated performance, one group performing as expected, and two groups with constrained performance, with the Dominican Republic and Costa Rica as outliers not included in the groupings. A review of these groups offers explanations as to why jurisdictions with similar economic contexts are demonstrating constrained, expected, or accelerated growth. These results are discussed in the following section on key financial policy and regulatory enablers.[45]

Shop keeper in village store, Purros, Namibia. (Matjaz Corel / Alamy Stock Photo)

Mapping women's account ownership in relation to levels of economic development serves as starting point to understanding each jurisdiction's level of women's financial inclusion. The next step is to understand which individual contributing factors enable women's financial inclusion and to what degree, with the ultimate objective of identifying ways in which countries that are facing challenges, performing as expected, or accelerating compared to their expected performance can direct resources more efficiently and with the greatest positive impact.

To identify the enabling factors to women's financial inclusion, the research used the above-outlined analytical framework to identify those factors with the greatest impact. First, jurisdiction profile data sets were developed through spreadsheets comprised of 100 indicators selected to present a comprehensive picture of three elements of the analytical framework — a jurisdiction's financial infrastructure, policies, and regulations; ICT and ID infrastructure; and its broader environment for women's financial inclusion.[46]

45 Given that cross-sectional analysis is fraught with some notable weaknesses such as difficulties in interpreting identified associations, and making causal inferences, it would be ideal for future statistical analysis to consider more robust methodology, such as static or perhaps dynamic longitudinal regression methodology, provided there is availability of data.

46 After establishing the framework with the four categories, the research team collected a list of key indicators from public data sets that reflect metrics in each category. As a next step, we filtered out indicators where the data was too old (as a rule of thumb, the latest data point was not older than 10 years) or where the coverage of the research-focused AFI member countries with Global Findex data was too low. The list was consulted and validated with AFI experts as well as a selection of external experts. The indicators reflect the publicly available data at the time of the research conclusion (Q2 2022).

A NOTE ON INDICATOR SELECTION

In selecting indicators, the research sought to measure the enabling environment with the latest data of the highest quality without sacrificing coverage of AFI member jurisdictions. Several issues were encountered related to limited data coverage during indicator selection. Many datasets claim to have global coverage but do not collect every indicator in every country; often, this means collecting a datapoint for the entire population, but not the female subset. Additionally, the most up-to-date information on financial inclusion often comes from national or regional surveys. These did not cover all AFI member jurisdictions, and the use of different methodologies at different points in time by regional or national surveyors meant that the team was not able to merge the collected data into one dataset.

Indicators were selected based on hypotheses of their potential effects on women's financial inclusion, derived from existing literature or expert opinion (i.e. restrictions on women's mobility are likely to limit women's economic activity and ability to transact financially). The selection was also meant to comprise a lean data set, with few overlaps (i.e. secondary educational attainment and average years in secondary education were both not used).

The indicators were validated with industry experts both within AFI as well as from other agencies and institutions like IFC and CGAP. Importantly, the data sets used to develop these indicators are updated on a periodic basis, so they can be used in the future to show changes over time and can be brought into the analysis as their number of sex-disaggregated indicators improves.


A Salvadoran woman stuffs a decorative pillow in an artisanal clothing workshop in Santiago Nonualco, El Salvador. (Jan Sochor / Alamy Stock Photo)

A total of 45 indicators were selected to reflect **Policies, Regulations, and Government Engagement** (i.e. indicators on the regular collection of sex-disaggregated supply and demand-side data, promotion of digital and financial literacy among women, and encouragement or incentivization of financial service providers to implement women-centric financial and non-financial solutions), and 55 indicators were selected to reflect **ICT and ID Infrastructure** (i.e. percent of adult females with an ID, proxy for women's phone ownership, and affordability of mobile services and devices) and the **Broader Environment of Women's Economic Participation, Inclusion, and Entrepreneurship** (i.e. women's earned income as a percentage of men's, gender gap in secondary educational attainment, and legal restrictions on women running a business).

The jurisdiction profile data sets were populated with findings from desk research and data supplied by members. Findings from desk research related to Policies, Regulations, and Government Engagement were verified with AFI members, while data for ICT and ID Infrastructure and the Broader Environment were sourced from the GSMA, World Bank, ILO, ITU and other major global surveys on these topics.

A multiple regression analysis using these indicators was run to determine the enabling factors with the greatest impact on women's financial inclusion. A principal component analysis (PCA) methodology was used to group indicators into fewer factors to avoid multicollinearity, which occurs when an independent variable (in this case, an indicator) is highly correlated with one or more of the other independent variables (again, indicators) in a multiple regression equation thereby undermining the statistical significance of an independent variable.[47] The indicators selected for grouping were chosen based on the quality and comparability of the data across jurisdictions and were grouped into six factors (see figure 4 below).

47 For a detailed explanation and statistical analysis, please refer to Annex 3.

For access to mobile phones and the internet, proxies were developed for women's phone ownership and access to the internet given the limited availability of sex-disaggregated data from the GSMA and ITU. The proxy for women's phone ownership was developed using GSMA data on overall access to mobile phones divided by Oxford University's mobile gender gap ratios. The proxy for women's access to the internet was developed using ITU data on overall access to the internet divided by Oxford University's internet gender gap ratios. The Oxford University source measures gender gaps in mobile and internet usage based on social media usage.

Multiple models were run using the six factors and the one with the highest statistical significance was identified, which provided results on the factors with the highest predictive power for women's financial inclusion. These results are discussed in the following section below.

FIGURE 4. FACTORS FOR MULTIPLE REGRESSION ANALYSIS WITH PCA[48]

CATEGORY	INDICATOR	PERIOD	# OF COUNTRIES COVERED	SOURCE
Digital payments	Made or received a digital payment, female	2021	41	Global Findex
	Mobile money account, Female	2021	41	Global Findex
Access to mobile phones and the internet	Mobile ownership	2020	49	GSMA
	Proxy women's phone ownership	2022	49	CCX elaboration based on GSMA
	Proxy women's access to the internet	2022	47	CCX elaboration based on ITU, and Oxford's Digital Gender Gap
Labor force	Labor force participation rate, female	2020	49	ILO
	Unemployment rate, female	2020	49	ILO
	Women's earned income as a percentage of men's	2020	49	UNHDR
	Estimated earned income, female (2017 Purchasing Power Parity dollars)	2020	49	UNHDR
Women's entrep.	Share of women receiving payments for self-employment	2017	49	Global Findex
	Share of business with female participation in ownership	2020	48	WBES
	Percentage of all SMEs that are owned by women	2020	43	SMEF
Education	Literacy rate, adult females	2020	49	UNESCO
	Secondary education attainment, female	2020	34	UNESCO
	Tertiary education attainment, female	2020	33	UNESCO
	Gender gap in secondary educational attainment	2020	34	UNESCO
	Financial literacy	2016	37	S&P
Legal and social norms	Legal restrictions on women in the workplace	2020	41	Women Business & Law
	Legal restrictions on women's ability to manage assets	2020	41	Women Business & Law
	Legal restrictions on women in running a business	2020	41	Women Business & Law
	Legal restrictions on women's mobility	2020	41	Women Business & Law
	Legal restrictions on women's marriage	2020	41	Women Business & Law

At the outset, linear regression was applied to individual indicators, supplemented by multiple regression. To mitigate the impact of multicollinearity, Principal Component Analysis (PCA) was employed to decompose the data into a reduced number of factors.

48 Due to lack of availability of data sources on all data points from the same period, the team chose to include a few indications from a different period.

KEY FINANCIAL POLICY AND REGULATORY ENABLERS OF WOMEN'S FINANCIAL INCLUSION

A small business owner in Wanyama East, Jinja District, Eastern Uganda, East Africa. (Jake Lyell / Alamy Stock Photo)

The above-outlined results are descriptive, allowing AFI to identify the factors contributing to levels of women's financial inclusion among the five groupings. To identify those factors that have the greatest predictive power on positive performance — and therefore indicate where countries with constrained resources should focus their efforts to accelerate women's financial inclusion — the multiple regression analysis described in the above section provided important insights.

The multiple regression analysis identified three key enabling factors influencing women's financial inclusion in order of impact: digital payments; access to mobile phones and the internet; and social norms and the legal environment. Among these, specific indicators had the greatest explanatory power:

Digital Payments

- Percentage of females aged 15+ making or receiving a digital payment
- Percentage of females aged 15+ with a mobile money account

Mobile Phone and Internet Access

- Mobile phone ownership
- Proxy for women's phone ownership
- Proxy for women's access to the internet

Social Norms and the Legal Environment

- Legal restrictions on women's ability to manage assets
- Restrictions on mobility
- Restrictions on marriage and divorce

Within digital payments, this includes the percentage of females aged 15+ making or receiving a digital payment and the percentage of females aged 15+ with a mobile money account.[49] Within access to mobile phones and the internet, the indicators with the greatest weight include mobile phone ownership, proxy for women's phone ownership, and proxy for women's access to the internet.[50] Among social norms and the legal environment, the indicators with the highest impact include legal restrictions on women's ability to manage assets, mobility, and marriage.[51]

These findings serve as a call to action for policymakers and regulators seeking to increase women's financial inclusion in their respective markets — focusing resources on digital payments, mobile phone and internet access, and social norms and the legal environment, which are more likely to have greater positive impacts on advancing women's access to and usage of financial products and services. Case studies (such as the ones that accompany this report) outlining successful initiatives undertaken by jurisdictions with accelerated women's financial inclusion can serve as examples for countries seeking to fast-track growth.

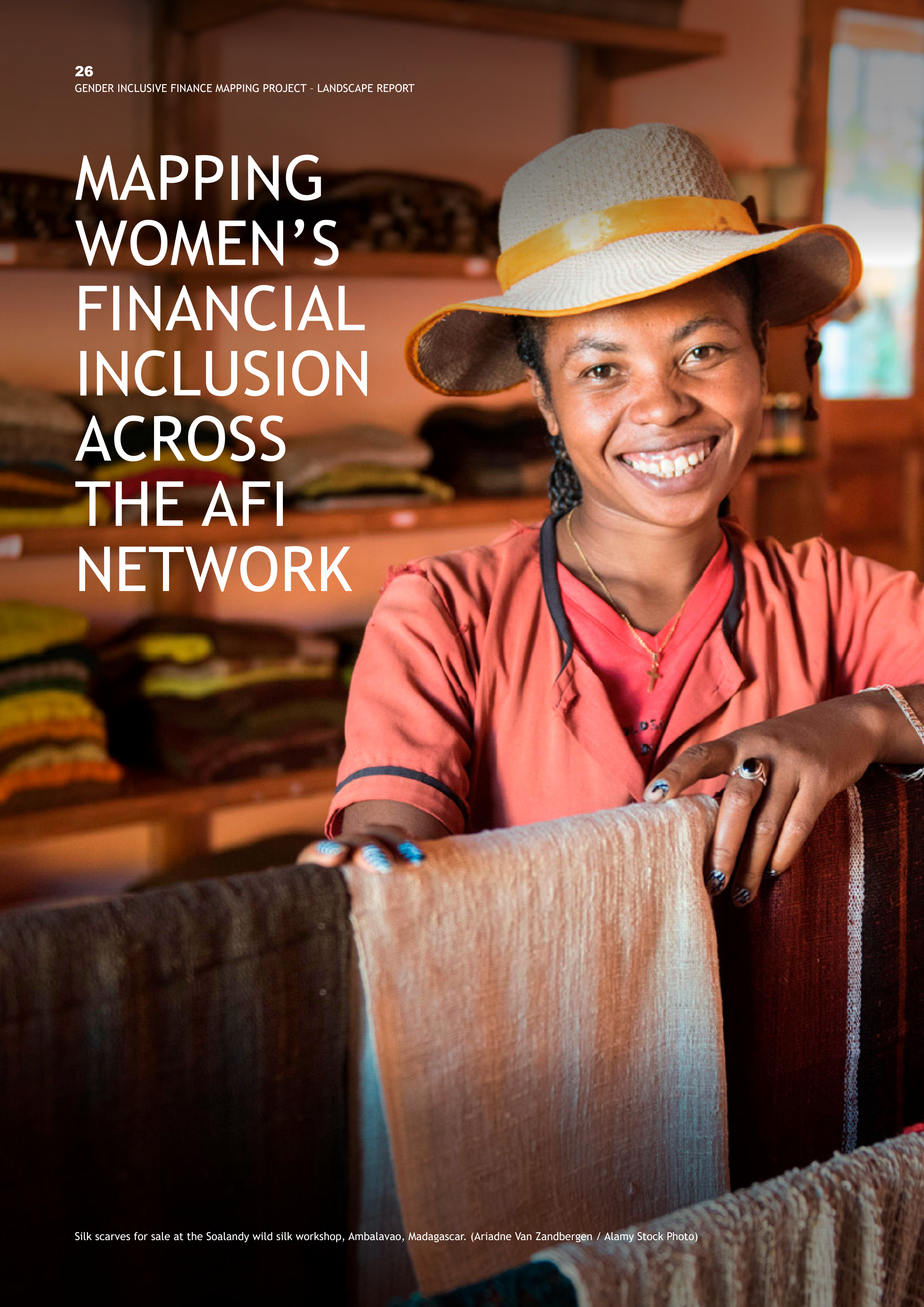
49 World Bank. 2022. Global Findex Database.

50 CCX elaboration is based on the ITU and GSMA database and the University of Oxford and Qatar Computing Research Institute's digital gender gaps.

51 World Bank. 2021. Women, Business and the Law. Available at: https://wbl.worldbank.org/content/dam/sites/wbl/documents/2021/02/WBL2021_ENG_v2.pdf

Business owner in a local market receiving a mobile transfer via phone. (Confidence Nzewi / Alamy Stock Photo)

MAPPING WOMEN'S FINANCIAL INCLUSION ACROSS THE AFI NETWORK



Silk scarves for sale at the Soalandy wild silk workshop, Ambalavao, Madagascar. (Ariadne Van Zandbergen / Alamy Stock Photo)

The mapping of women's financial inclusion, as measured by access to formal financial services in relation to levels of economic development, allowed the identification of five distinct groups of environments among AFI member jurisdictions for which data was available.

For each group, specific factors play a more predominant role in accelerating or constraining women's financial inclusion. Groups emerged from the relative positions of the jurisdictions on the matrix, identifying expected and actual performance of women's financial inclusion (see figure 5 below) and shared commonalities in factors contributing to or constraining growth. These groups were validated through discriminant analysis, using the factors described above, which confirmed the accuracy of the classification.

GROUPS EMERGING FROM THE MAPPING EXERCISE:

Group 1:
Digital payment-driven acceleration

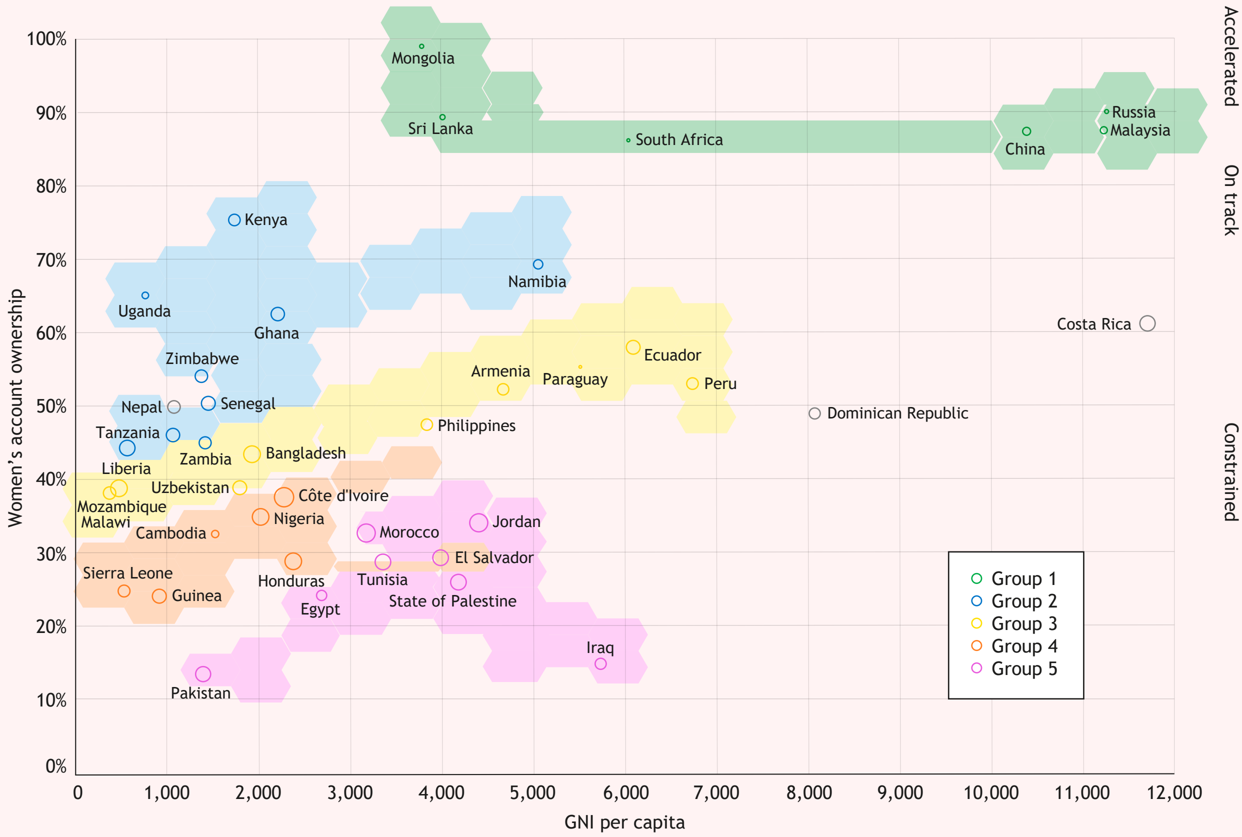
Group 2:
Mobile money-driven acceleration

Group 3:
Performing as expected

Group 4:
Constrained by gaps in infrastructure and education

Group 5:
Constrained by the environment for women's economic participation and social norms

FIGURE 5. FIVE DISTINCT GROUPS EMERGE FROM MAPPING WOMEN'S FINANCIAL INCLUSION IN RELATION TO LEVELS OF ECONOMIC GROWTH



GROUP ONE: DIGITAL PAYMENT-DRIVEN ACCELERATION

Group one demonstrates accelerated levels of women's financial inclusion, driven by a high level of activity in digital payments, primarily fueled by payments made by the government to citizens (G2P) (e.g. Mongolia), wage digitization (e.g. Sri Lanka), and e-commerce (e.g. China). Among group one countries, 79 percent of females aged 15+ reported having made or received a digital payment (e.g. 76 percent of women in Malaysia and 99 percent of women in Mongolia), and 48 percent of females aged 15+ reported receiving a G2P payment (e.g. 67 percent of women in Russia and 91 percent of women in Mongolia).

GROUP 1 JURISDICTIONS

China, Malaysia, Mongolia, Russia, South Africa, and Sri Lanka

GROUP 1 EXAMPLE: MONGOLIA

- National Financial Inclusion Strategy launched in 2022
- Strong G2P focusing on child subsidies
- 99 percent female formal account ownership with a positive gender gap

In group one, countries are close to achieving universal financial inclusion with 90 percent of adult women owning a bank account and a gender gap of zero percent. Here, account usage among women is also high at 85 percent.

This group's positive performance in women's financial access is driven by having key foundational DFS policies in place (i.e. mobile money regulation, interoperability of payments, tiered know-your-customer (KYC) regulations for account or wallet opening, etc.), umbrella strategies at the national level related to digital transformation and financial inclusion (i.e. national financial inclusion strategies or digital transformation strategies), strong ICT and ID infrastructure and usage, and a conducive broader environment founded on relatively high rates of literacy and financial literacy. Regarding foundational policies, all six countries have an NFIS in place. Two out of three countries have an open payment infrastructure in place, which is significantly higher than the 18 percent average among all the researched countries. Most of the group has credit bureaus set up and regulated (80 percent versus 68 percent) and with gendered data collection (83 percent versus 53 percent).

Within this group, jurisdictions are largely driven by the goal of developing cashless economies, which influences many factors, necessitating, for example, the development of foundational policies and ID and ICT infrastructure, as well as leading to the digitization of key government programs such as child subsidies and pension schemes to ensure use cases. High degrees of women's participation in these jurisdictions' economies are driven by high female literacy rates and education levels and are not constrained by legal restrictions on the management of access, mobility, and marriage.

TABLE 1: GROUP 1 - KEY PARAMETERS ON THE PERFORMANCE OF WOMEN'S FINANCIAL INCLUSION

Indicator	China	Malaysia	Mongolia	Russia	South Africa	Sri Lanka	Group avg.
Bank account ownership (women)	87%	88%	99%	90%	86%	89%	90%
Gender gap in account ownership	3%	2%	-1%	-1%	-2%	0%	0%
Active bank account users (women)	85%	84%	99%	89%	84%	67%	85%
Received government payments (women)	14%	48%	91%	67%	46%	24%	48%
Sent or received domestic remittances (women)	38%	37%	47%	46%	58%	25%	42%
Made or received a digital payment (women)	85%	76%	99%	88%	82%	48%	79%
Gender gap in made/received digital payment	2%	7%	-2%	-1%	-3%	16%	3%
Mobile money account ownership (women)	N/A	29%	60%	32%	39%	2%	32%
Gender gap in mobile money account	N/A	-2%	-3%	3%	-5%	3%	-1%

GROUP TWO: MOBILE-MONEY DRIVEN ACCELERATION

Group two also demonstrates accelerated women's financial inclusion, driven by a high level of mobile money activity, specifically mobile money account ownership and remittance transfers. Among group two countries, 54 percent of females aged 15+ reported having made or received a digital payment; 46 percent of females aged 15+ have a mobile money account (e.g. 55 percent of women in Ghana, and 66 percent of women in Kenya) and 54 percent reported having sent or received domestic remittances (e.g. 59 percent of women in Ghana, and 74 percent of women in Kenya).

GROUPS 2 JURISDICTIONS

Ghana, Kenya, Liberia, Namibia, Senegal, Uganda, and Zimbabwe

GROUP 2 EXAMPLE: KENYA

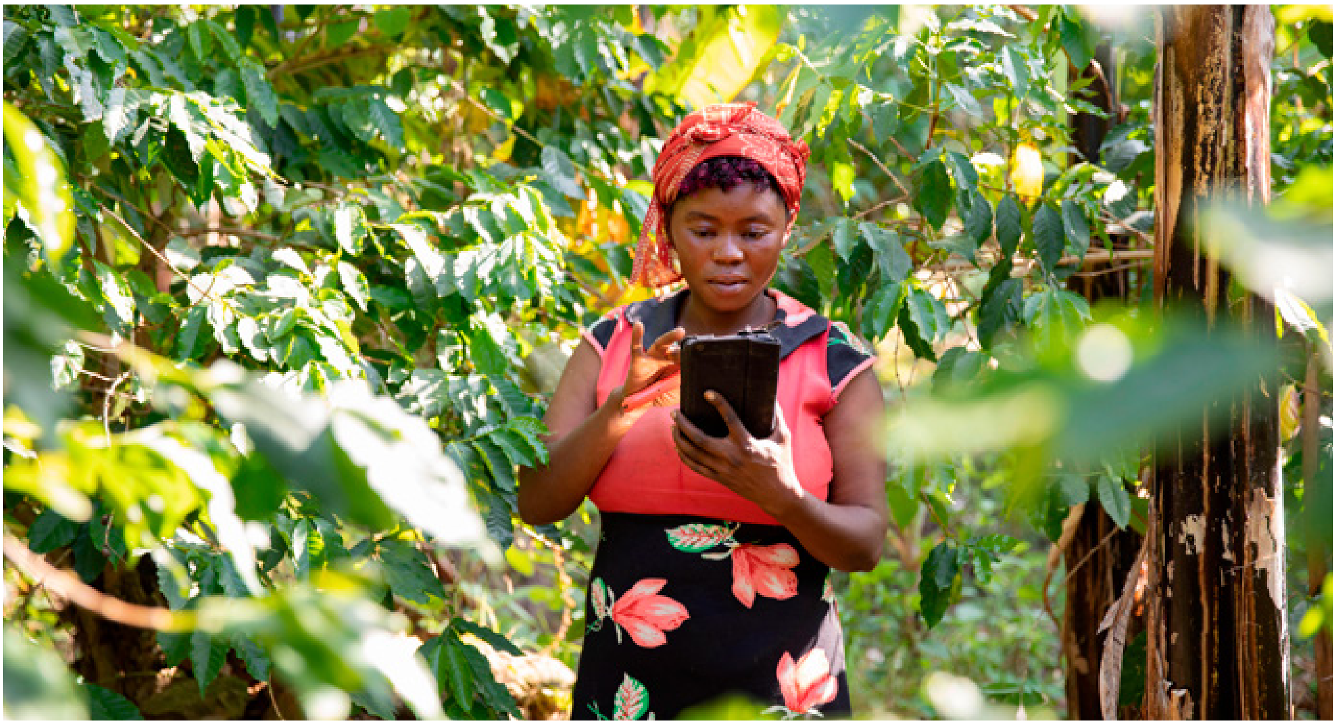
- Mobile money regulations & active environment since 2007
- Formal financial inclusion is high at 84 percent
- Regular collection of demand-size sex-disaggregated data
- Efforts to promote sex-disaggregated data collection and reporting for women-owned businesses.

In group two, countries demonstrate levels of adult women's account ownership at 57 percent (with a 10 percent gender gap), and 55 percent of adult women are active bank account users.

Group two shares many of the positive foundational characteristics as group one in supporting women's financial inclusion as group one (i.e. NFIS in place, mobile money and agent banking regulation, interoperability of payments, tiered know-your-customer (KYC) regulations for account or wallet opening, etc.). Here, high penetration and adoption of mobile money for livelihood and business use cases accelerated financial inclusion for women, while mobile money solutions provide a critical solution for populations working in the informal economy, in which women are often disproportionately represented. The governments also aim to advance digital ID ownership (89 percent versus 55 percent in total).

TABLE 2: GROUP 2 - KEY PARAMETERS ON THE PERFORMANCE OF WOMEN'S FINANCIAL INCLUSION

Indicator	Ghana	Kenya	Liberia	Namibia	Senegal	Uganda	Tanzania	Zambia	Zimbabwe	Group avg.
Bank account ownership (women)	63%	75%	44%	69%	50%	65%	46%	45%	54%	57%
Gender gap in account ownership	12%	8%	15%	4%	12%	2%	13%	8%	12%	10%
Active bank account users (women)	60%	74%	40%	66%	48%	62%	45%	44%	52%	55%
Received government payments (women)	9%	15%	9%	29%	11%	9%	7%	16%	13%	13%
Sent or received domestic remittances (women)	73%	60%	46%	59%	57%	68%	43%	40%	44%	54%
Made or received a digital payment (women)	59%	74%	39%	64%	47%	62%	44%	44%	52%	54%
Gender gap in made/received digital payment	13%	8%	14%	4%	12%	1%	12%	5%	11%	9%
Mobile money account ownership (women)	55%	66%	32%	41%	38%	53%	40%	39%	46%	46%
Gender gap in mobile money account	10%	5%	8%	3%	14%	1%	9%	5%	10%	7%



A woman farmer uses a mobile tech device tablet to run her farming business in Kasese District, Uganda, East Africa. (Jake Lyell / Alamy Stock Photo)

On the other hand, group 2 faces ICT-related barriers (women's smartphone ownership is relatively low) and lower performance in women's education (with the lowest rates of secondary and tertiary educational attainment across all groups). Mobile money operators (MNOs) have responded to these challenges through optimized user experiences, leveraging USSD solutions on feature phones, and integrating financial and digital literacy into their solutions. Digital payment rates in groups one and two contrast with significantly lower rates in groups three through five, where the percentage of females aged 15+ making or receiving a digital payment range from 17 percent to 39 percent (see figure 6 below). While digital payments through mobile money can take off through feature phones and USSD, challenges of relatively high data costs and a gender gap in smartphone ownership might still be an issue.

FIGURE 6. DIGITAL PAYMENTS FACTORS PERFORMANCE BY GROUP

	Group 1	Group 2	Group 3	Group 4	Group 5
Received government payments, female (% age 15+)	48%	13%	22%	11%	13%
Sent or received domestic remittances, female (% age 15+)	42%	54%	30%	36%	18%
Made or received a digital payment, female (% age 15+)	79%	54%	39%	25%	17%
Gender gap in made/reeived digital payment	3%	9%	12%	15%	13%
Mobile money account, female (%age 15+)	32%	46%	22%	13%	3%
Gender gap in mobile monet account	-1%	7%	9%	8%	5%

GROUP THREE: PERFORMING AS EXPECTED

Group three is performing as expected based on the mapping of women's financial inclusion against GNI per capita. Here, adult women's account ownership is at 47 percent with an 11 percent gender gap, and 43 percent of adult women are active account users. In DFS, 39 percent of females aged 15+ have made or received a digital payment, and mobile money account ownership among the group stands at 22 percent. Using formal institutions, savings is at seven percent (e.g. eight percent of women in Ecuador, or six percent of women in Malawi), and access to credit is at 15 percent.

GROUP 3 JURISDICTIONS

Armenia, Bangladesh, Ecuador, Malawi, Mozambique, Paraguay, Peru, the Philippines, and Uzbekistan

Within this group, most key DFS foundational policies are in place (i.e. mobile money regulation, interoperability of payments, tiered know-your-customer (KYC) regulations for account or wallet opening, etc.) and umbrella strategies exist (i.e. National Financial Inclusion Strategy, Digital Transformation or FinTech Strategy (89 percent versus 61 percent total), Financial Literacy or Education Plan (100 percent versus 71 percent total) to support women's financial inclusion. In most countries, e-KYC for account opening is permitted. The group performs strongly on the collection of supply-side data, and while enabling ID and ICT infrastructure are in place, women's phone ownership and access to the internet are more moderate than in groups one and two. Group three has the highest share of countries with regulated and set-up credit bureaus (89 percent versus 68 percent total), most of which include a gender variable in their data collection.

Among this group, a step-by-step approach to developing and implementing foundational DFS policies and national financial inclusion strategies has led to a gradual improvement in financial access for women over time. This is supported by a high penetration of national ID ownership and high labor force participation rates in these jurisdictions.

TABLE 3: GROUP 3 - KEY PARAMETERS ON THE PERFORMANCE OF WOMEN'S FINANCIAL INCLUSION

	Group 3 - Expected WFI	Grand Total
Percent of adult women who own a bank account	47%	49%
Gender gap in account ownership	11%	10%
Percent of adult women who are active bank account users	43%	45%
Gender gap in active account users	11%	11%
Made or received a digital payment, female	39%	42%
Gender gap in made/received digital payment	12%	11%
Mobile money account, female	22%	24%
Gender gap mobile money account	9%	6%

Indicator	Armenia	Bangladesh	Ecuador	Malawi	Mozambique	Paraguay	Peru	The Philippines	Uzbekistan	Group avg.
Bank account ownership (women)	52%	43%	58%	38%	39%	55%	53%	47%	39%	47%
Gender gap in account ownership	7%	19%	13%	10%	22%	-2%	9%	8%	11%	11%
Active bank account users (women)	48%	38%	49%	36%	32%	52%	49%	42%	37%	43%
Received government payments (women)	21%	9%	15%	10%	11%	25%	31%	38%	42%	22%
Sent or received domestic remittances (women)	27%	27%	25%	36%	33%	33%	33%	47%	14%	30%
Made or received a digital payment (women)	43%	34%	40%	36%	31%	51%	44%	39%	36%	39%
Gender gap in made/ received digital payment	9%	24%	13%	10%	22%	1%	10%	9%	13%	12%
Mobile money account ownership (women)	16%	20%	N/A	30%	21%	38%	9%	19%	N/A	22%
Gender gap in mobile money account	3%	18%	N/A	9%	16%	0%	11%	6%	N/A	9%

GROUP FOUR: CONSTRAINED BY GAPS IN INFRASTRUCTURE AND EDUCATION

Group four demonstrates constrained performance against the expected values of women's financial inclusion due to gaps in infrastructure and women's education. Within ID and ICT infrastructure, group four lags on the percentage of the adult population with an ID, women's phone ownership, and women's access to the internet. The broader economic environment to support women's financial inclusion is constrained by low performance in skills development and educational attainment for women (i.e. in Honduras, women's secondary education attainment is 24 percent, while for Côte d'Ivoire it is only seven percent) as well as the highest percentage (32 percent) of women married before the age of 18 (43 percent in Nigeria and 47 percent in Guinea).[52]

GROUP 4 JURISDICTIONS

Cambodia, Côte d'Ivoire, El Salvador, Guinea, Honduras, Nigeria, and Sierra Leone

52 Percentage of women aged 20 to 24 years who were first married or in union before ages 18.

Women's financial inclusion in terms of account ownership is 30 percent (with an average of a 15 percent gender gap) and just 27 percent of adult women are active account users compared to 85 percent in group one. Women accessing formal credit is at 11 percent (e.g. 11 percent of women in El Salvador, or six percent of women in Nigeria), and 36 percent of women sent or received domestic remittances (e.g. 49 percent of women in Cambodia, or 35 percent of women in Sierra Leone). Group four has few females 15+ making or receiving digital payments (just 29 percent) and fewer with mobile money accounts (just 12 percent).

While financial inclusion overall is low compared to other countries, some steps have already been taken to react to this through DFS regulation: all of them have an NFIS in place, most with an explicit gender angle incorporated, and most also have a Financial Literacy Plan and MSME Masterplan. Other regulatory aspects, such as credit bureau regulation, the existence of a national switch, or FinTech Strategy, lag behind those of other groups.

TABLE 4: GROUP 4 - KEY INDICATORS ON ICT AND ID INFRASTRUCTURE AND EDUCATION

	Group 4	Total
Percent of adult population with IDs	78%	85%
Proxy for women's phone ownership	41%	54%
Proxy for women's access to the internet	32%	44%
Literacy rate, adult females	57%	76%
Secondary educational attainment - female	18%	36%
Tertiary educational attainment - female	18%	34%

A mobile stall selling dried squid in Kampot, Cambodia. (Tom Vater / Alamy Stock Photo)

Group four performs the lowest across important indicators such as mobile money regulation, the existence of a national switch to support interoperability related to mobile money, and permissibility of e-KYC to support account opening — all key policies and regulations to support women's financial inclusion. Similarly, the group performs poorly on the existence of umbrella strategies to support women's financial inclusion and gender inclusive consumer protection regulation. Where these do exist, there is a significant gap in implementation guidelines for digital financial services and FinTech-focused efforts.

GROUP 4 EXAMPLE: EL SALVADOR

- Low literacy rate and overall educational attainment for women
- Lack of a national digital transformation strategy and FinTech strategy
- Only recent growth in mobile money use after the 2015 regulation of mobile money
- Financial Data Protection Act not in place

TABLE 5: GROUP 4 - KEY PARAMETERS ON THE PERFORMANCE OF WOMEN'S FINANCIAL INCLUSION

Indicator	Cambodia	Côte d'Ivoire	El Salvador	Guinea	Honduras	Nigeria	Sierra Leone	Group avg.
Bank account ownership (women)	33%	37%	29%	24%	29%	35%	25%	30%
Gender gap in account ownership	2%	27%	16%	13%	20%	20%	9%	15%
Active bank account users (women)	27%	35%	25%	22%	26%	30%	24%	27%
Received government payments (women)	23%	4%	25%	6%	10%	4%	9%	11%
Sent or received domestic remittances (women)	49%	48%	14%	42%	21%	44%	35%	36%
Made or received a digital payment (women)	24%	35%	22%	21%	24%	23%	23%	25%
Gender gap in made/received digital payment	5%	25%	13%	12%	18%	22%	8%	15%
Mobile money account ownership (women)	5%	30%	10%	17%	6%	5%	17%	13%
Gender gap in mobile money account	3%	21%	2%	9%	6%	6%	5%	8%

GROUP FIVE: CONSTRAINED BY THE BROADER ENVIRONMENT FOR WOMEN'S ECONOMIC PARTICIPATION AND SOCIAL NORMS

Group five demonstrates the most constrained performance against the expected values of women's financial inclusion due to significant barriers for women's economic participation and legal rights. Most of these factors are outside the mandate of the financial regulator, but they have a significant impact on how foundational policy and regulation can be actioned. Women's account ownership is at 25 percent, with a 15 percent gender gap, and 21 percent of adult women are active account users. Access to formal credit is five percent (e.g. six percent of women in Jordan, and four percent of women in Morocco), and remittances is 18 percent (e.g. 20 percent of women in Egypt, and 22 percent of women in Iraq). Group five has the lowest percentage of females using DFS, with just 17 percent of females 15+ making or receiving digital payments and 12 percent holding a mobile money account.

GROUP 5 JURISDICTIONS

Egypt, Iraq, Jordan, Morocco, Palestine, Pakistan, and Tunisia

GROUP 5 EXAMPLE: PAKISTAN

- Low literacy rate and overall educational attainment for women
- Lack of a national digital transformation strategy and FinTech strategy
- Only recent growth in mobile money use after the 2015 regulation of mobile money
- Financial Data Protection Act not in place
- Landmark banking on equality policy launched to improve women's financial inclusion (including regular, mandated sex-disaggregated data collection)

TABLE 6: GROUP 5 - KEY PARAMETERS ON THE PERFORMANCE OF WOMEN'S FINANCIAL INCLUSION

Indicator	Egypt	Iraq	Jordan	Morocco	Pakistan	State of Palestine	Tunisia	Group avg.
Bank account ownership (women)	24%	15%	34%	33%	13%	26%	29%	25%
Gender gap in account ownership	6%	7%	25%	23%	15%	16%	16%	15%
Active bank account users (women)	21%	12%	29%	27%	12%	20%	25%	21%
Received government payments (women)	17%	12%	15%	13%	6%	13%	16%	13%
Sent or received domestic remittances (women)	20%	22%	19%	26%	9%	13%	18%	18%
Made or received a digital payment (women)	16%	11%	24%	21%	11%	15%	21%	17%
Gender gap in made/received digital payment	8%	6%	23%	18%	12%	12%	13%	13%
Mobile money account ownership (women)	2%	3%	6%	4%	3%	2%	2%	3%
Gender gap in mobile money account	2%	4%	10%	4%	11%	1%	3%	5%

Group five has many external constraints, however, it demonstrates some positive trends, such as proactive regulators and financial policymakers having a wide range of key foundational policies in place and actioned to support women's financial inclusion and strong performance in the collection of supply and demand-side data. There is strong evidence of utilizing this data for policy design, which represents a positive trend that can impact future performance. One notable example is the Banking on Equality Policy launched in 2022 by the State Bank of Pakistan, which prescribes the detailed collection and reporting of sex-disaggregated data for regulated financial institutions along with targets set to improve women's access and usage of finance.

On the other hand, women's economic participation (as indicated by low labor force participation by females, low women's earned income as a percentage of men's, and a low share of businesses with female participation in ownership) and legal rights (lowest performance across groups in legal restrictions on women in the workplace, ability to manage assets, running a business, mobility, and marriage) constrain women's financial inclusion.

Woman entrepreneur selling vegetables at a Chinese indoor market in Nanjing in China. (Ger Beekes / Alamy Stock Photo)

TABLE 7: GROUP 5 - KEY PARAMETERS ON THE PERFORMANCE OF WOMEN'S FINANCIAL INCLUSION

	Group 5	Grand Total
Percent of adult women who own a bank account	25%	49%
Gender gap in account ownership	15%	10%
Percent of adult women who are active bank account users	21%	45%
Gender gap in active account users	14%	11%
Made or received a digital payment, female	17%	42%
Gender gap in made/received digital payment	13%	11%
Mobile money account, female	3%	24%
Gender gap in mobile money account	5%	6%

Group five is similar to group four, the other constrained cluster. Overall financial inclusion is lower than in the other groups, but some DFS regulations are in place. While not all of them have an NFIS in place (71 percent versus 87 percent total), those that do all have a gender angle incorporated. Government payment digitization for women recipients is the lowest here (43 percent versus 61 percent total). These countries aim to address their situation through coordination among key policymakers and regulators regarding GIF in addition to using data-based insights for policy design.

In summary, women's financial inclusion performance mirrors trends in key parameters (see figure 7 below), where groups one and two demonstrate strong performance, group three moderate performance, and groups four and five constrained performance in account ownership and usage among adult women, women's phone ownership, and the labor force participation rate.

TABLE 8: GROUP 5 - KEY PARAMETERS ON THE PERFORMANCE OF WOMEN'S FINANCIAL INCLUSION

Values	Group 1	Group 2	Group 3	Group 4	Group 5	Total
Legal restrictions on women in the workplace	79	97	83	82	68	83
Legal restrictions on women's ability to manage assets	90	73	89	89	40	76
Legal restrictions on women in running a business	83	78	83	89	75	82
Legal restrictions on women's mobility	92	89	92	89	54	84
Legal restrictions on women's marriage	87	87	84	74	31	74

FIGURE 7. WOMEN'S FINANCIAL INCLUSION PERFORMANCE MIRRORS TRENDS IN KEY PARAMETERS AMONG GROUPS

Values	Group 1	Group 2	Group 3	Group 4	Group 5
Percent of adult women who own a bank account	90	57	47	30	25
Gender gap in account ownership	0	10	11	15	15
Percent f adult women who are active bank account users	85	55	43	27	21
Gender gap in active account users	2	9	11	15	14
Percent of adult population with ID	94	83	90	78	79
Mobile ownership, GSMA	86	55	66	61	70
Women's phone ownership (proxy)	80	47	51	41	57
Percent of population using the internet	69	32	50	35	65
Women's access to internet (proxy)	66	27	47	32	55
Labor force participation rate, female	57	67	60	58	20
Literacy rate, adult females	94	70	84	57	75
Secondary education attainment - female	60	9	52	18	39
Tertiary education attainment female	57	15	38	18	38

EMERGING INSIGHTS FROM A REGIONAL PERSPECTIVE

The sample size by region is too small to be able to provide in-depth analysis of the data; however, reviewing the analysis findings from a regional perspective reveals some important trends, strengths, and constraints that can be investigated further with broader sample sizes.

The Arab region[53] of AFI members covered by the 2021 Global Findex demonstrates the largest gender gap in account ownership at 16 percent, driven by low women's labor force participation (20 percent versus 10 percent total[54]) as well as more restrictive legal environments on women in the workplace, their ability to manage assets and run a business, mobility, and related to marriage.

On the other hand, strengths include:

- Foundational digital financial services policies in place
- Gender-intentional national financial inclusion strategies
- Sex-disaggregated data collection
- High levels of women's phone ownership (64 percent versus 54 percent in total) and access to internet (62 percent versus 44 percent in total)
- Relative affordability of mobile phones and devices

Latin America and the Caribbean[55] members covered by the 2021 Global Findex demonstrate a significant gender gap in account ownership (11 percent versus 10 percent total), driven by the lack of gender-intentionality in financial policies and gaps in foundational digital financial services policies. Strengths include:

- Universal availability of national identification systems
- High levels of women's phone ownership (67 percent versus 55 percent total), access to the internet (64 percent versus 46 percent total), and labor force participation (59 percent versus 53 percent)
- Enabling legal environment for women in the workplace, women's mobility, and management of assets

Sub-Saharan Africa[56] has the largest group of AFI members covered by the 2021 Global Findex and demonstrates a significant gender gap in account ownership (12 percent versus 10 percent total), constrained by infrastructural challenges such as limited access to electricity. Relative unaffordability of mobile services and devices, low levels of mobile phone ownership, low levels of access to the internet, a low literacy rate, and a significant gender gap in secondary educational attainment also constrain the environment. In contrast, strengths include:

- Mobile money prevalence
- Foundational digital financial policies in place
- Gender-intentional national financial inclusion strategies
- Financial literacy programs in place
- Strategies, policies, and plans to support micro, small, and medium enterprises
- High labor force participation

Asian[57] members covered by the 2021 Global Findex demonstrate the lowest gap in account ownership (six percent versus 10 percent total), buoyed by foundational DFS policies in place, G2P programs targeting women, prevalence of national financial inclusion and digital transformation strategies, high national identification coverage, and relative affordability of mobile services and devices. The legal environment for women in the workplace, mobility, and ownership of assets are common constraints.

The research does not provide clear trends for Eastern and Central Asia since the number of countries for which needed data was available for analysis from this region is limited to three countries: Armenia, the Russian Federation, and Uzbekistan.

53 Comprised of Egypt, Iran, Jordan, Morocco, State of Palestine, and Tunisia.

54 Total of the 41 AFI member countries in the research.

55 Comprised of Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Paraguay, and Peru.

56 Comprised of Cote d'Ivoire, Ghana, Guinea, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mauritania, Mozambique, Namibia, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Uganda, Tanzania, Zambia, and Zimbabwe.

57 Comprised of Bangladesh, Cambodia, China, Malaysia, Mongolia, Nepal, Pakistan, Sri Lanka, and the Philippines.

PATHWAYS TOWARDS GREATER WOMEN'S FINANCIAL INCLUSION

A smiling papaya vendor in the traditional local street market. Welimada, Sri Lanka. (Francesco Dazzi / Alamy Stock Photo)

A review of the above-outlined findings by group and region allows for the identification of pathways towards greater women's financial inclusion.

Recommended areas of focus for regulators, based on the best practices demonstrated within the AFI network, are included in figure 8 below.

FIGURE 8. RECOMMENDED AREAS OF FOCUS FOR FINANCIAL SECTOR REGULATORS BY GROUP

Group	Recommended areas of focus for financial sector regulators
Group 1 **Digital payment-driven acceleration**	• Expand the focus of gender inclusive policymaking to include a wider suite of financial services, such as insurance and pensions. • Develop measures to sustain the level of financial inclusion and the gains made in overall inclusion.
Group 2 **Mobile-money driven acceleration**	• **Focus on bridging the gender gap in usage and financial health.**
Group 3 **Performing as expected**	• Focus on deepening the internal capacity of regulatory agencies to advance WFI strategy implementation.
Group 4 **Constrained by gaps infrastructure and education**	• **Ensure that "umbrella" policies such as gender-inclusive NFIS and National Digital Transformation Plans as well as implementation mechanisms are in place to articulate strategies and coordinate multi-stakeholder activities.** • **Learn from the experiences of Groups 1 and 2.**
Group 5 **Constrained by the broader environment for women's economic participation and social norms**	• ***Collaborate with non-financial sector regulators and public sector agencies in*** addressing barriers (legal and social norms) to achieve greater women's economic participation and inclusion. • Learn from the experiences of Groups 1 and 2.

Regionally, addressing constraints and building on strengths would look as shown in figure 9 below.

FIGURE 9. RECOMMENDED AREAS OF FOCUS FOR FINANCIAL SECTOR REGULATORS BY REGION

Region	Recommended areas of focus for financial sector regulators
Arab Region	• **Address legal constraints and social norms, particularly those leading to low labor force participation by women.**
Latin American & the Caribbean	• **Bringing greater gender intentionality into policymaking efforts, specifically with an emphasis on women as part of national finantial inclusion and digital transformation strategies along with specific targets.**
Sub-Saharan Africa	• **Build infrastructure necessary to support access to digital financial services and address literacy and secondary education gaps.**
Asia	• **Reduce constraints on the legal environment for women in the workplace, related to mobility, and on ownership of assets.**

These recommendations are addressed in detail in the Call-to-Action report.

LESSONS FROM COVID-19 ON THE IMPACT OF CRISES ON WOMEN'S FINANCIAL INCLUSION

A woman in Andohasana Market, Madagascar Central Highlands. (Matthew Williams-Ellis Travel Photography / Alamy Stock Photo)

Despite concentrated efforts to combat its effects, the aftereffects of the COVID-19 pandemic continue to disrupt lives and economies across the globe. Although the consequences of this unprecedented crisis are yet to be fully measured, the ongoing effects have been more devastating for developing economies, and the impact is being felt disproportionally by vulnerable and disadvantaged populations, including women in many, if not most, countries. While significant financial inclusion gains have been made in the last decade, including for the 70 percent of the world's unbanked population represented by the AFI network,[58] more than 760 million women globally are left financially excluded.[59]

The availability and usage of digital financial services have been an important driver of positive gains for women's financial inclusion, and have grown exponentially since the onset of the COVID-19 pandemic as financial service providers and their customers sought ways to continue transacting, and governments searched for methods of delivering much-needed assistance in the form of cash transfers and other aid to their populations, all without the need for in-person contact. Financial service providers quickly upgraded their digital channels, providers with innovative solutions to meet COVID-19 specific needs emerged, and new and existing customers quickly tackled the learning curve to using DFS. Account opening, particularly for mobile money accounts, has been streamlined in many jurisdictions, and costs for the data required to access digital channels have been addressed.

Unfortunately, the lasting economic impacts of COVID-19 and subsequent additional shocks to the global economy have put financial inclusion gains at risk and have the potential to further exacerbate challenges with women's access and usage of financial products and services. Women are suffering outsized economic impacts due to their disproportionate representation in informal work and services sectors such as retail commerce and hospitality. These sectors have been among the most affected by mobility restrictions and could not easily shift to work-from-home operations, resulting in greater unemployment and income losses for women compared to men.

As school and childcare facilities closed intermittently or over longer stretches of time and older persons needed more support,[60] the unpaid care burden fell primarily on women, who were shouldered with additional unpaid domestic care responsibilities and no longer able to fully keep up with their economic activities. These factors are exacerbated for women who also have intersecting vulnerabilities, such as rural dwellers, older persons, and persons living with disabilities, who in many jurisdictions have a harder time finding and maintaining employment, may lack some of the needed technological skills for work-from-home, if it is even an option, or who may be further removed geographically from services or programs that could otherwise offer support.

The pandemic period also saw a rise in gender-based violence due to the uptick in time spent at home and stress caused by COVID-19 and its negative economic effects. This, too, had outsized effects on women.

Financial policymakers and regulators have a strong role to play in addressing the setbacks experienced by girls and women due to the pandemic, and encouraging evidence is mounting that gender-intentional policies can invert even previously widening gaps (as seen in Bangladesh, Egypt, Nigeria, and Pakistan) while creating a more effective crisis response, particularly relevant to policymakers and regulators in resource-constrained markets. Gender-intentional approaches are critical because they take into consideration the barriers and limitations different genders face and, when they are used, interventions and solutions are designed to address these barriers, thereby generating more equity. In contrast, gender neutral approaches are blind to the differing experiences, needs, and behaviors of men and women, often reinforcing practices based on existing prejudices or inequities.

58 Alliance for Financial Inclusion. 2021. Mitigating the Impact of COVID-19 on Gains in Financial Inclusion. Available at: https://www.afi-global.org/publications/mitigating-the-impact-of-covid-19-on-gains-in-financial-inclusion-early-lessons-from-regulators-and-policymakers/

59 Calculated on the basis of the UN Population Division's Population Prospects: 2019 Revision for ages 15 and above with Global Findex 2021 data (26 percent exclusion for women and 21.7 percent for men, equivalent to 633.5 million excluded men).

60 In Uganda, schools only reopened on 10 January 2022 after some 22 months of closure but in many other countries a patchwork of closures, remote and hybrid instruction has introduced an enormous degree of unpredictability into the lives of parents of kindergarten and school-age children, especially mothers. See, for example, the variation over time and school districts documented for the US at: https://crpe.org/pandemic-learning/tracking-district-actions/

When implemented, gender-intentional approaches create positive outcomes for families and communities and generate more equity for vulnerable populations at large. There is growing recognition of this, but it has yet to fully translate into widespread global action as many national financial inclusion strategies remain largely gender neutral and lack realistic action plans for advancing women's financial inclusion. Due to significant gaps in national and global sex-disaggregated data, only limited in-depth research has been undertaken to understand which specific policies are effective in maintaining and encouraging women's financial inclusion in crisis situations. There is now a real opportunity to change this for the better by collecting and using data to inform future policymaking.

Three major areas of focus to support gender-intentional policymaking, which is critical to increasing women's financial inclusion during any crisis response, have emerged from lessons learned during the COVID-19 pandemic:

- Effective, sex and age-disaggregated supply and demand data that is regularly collected, reviewed, reported on, and analyzed is critical to enable evidence-based policymaking.
- Alliances and intensified coordination between public and private financial sector stakeholders enable more efficient, innovative, and impactful interventions.
- Leveraging digital financial services with a gender lens approach (i.e. ensuring widespread access via agent networks, investing in consumer protection), particularly in the provision of social relief policies.

An example of good practice in effective women-centric national policymaking is Peru's Multisectoral Commission of Financial Inclusion (CMIF), a national gender committee set up by the government that brings together the banking, pension-fund, and insurance supervisor (SBS), the Central Reserve Bank of Peru, Bank of the Nation, Ministry of Economy and Finance, Ministry of Development and Social Inclusion, and the Ministry of Women and Vulnerable Populations. The Commission developed and finalized the National Strategy of Financial Inclusion (ENIF) between 2014 and 2015 and set up working groups including private sector stakeholders, such as industry associations, to lead a dialogue and development of the FI strategy.[61]

Further background on the importance of taking a gender-sensitive approach to the COVID-19 response, and more generally, how women's financial inclusion is key to building resilience and mitigating crisis, is available in two recent AFI publications.[62]

61 See https://thedocs.worldbank.org/en/doc/297641553198986785-0130022019/original/NFISSession16Peru.pdf for more information.

62 Alliance for Financial Inclusion. 2021. Why the Economic Response to COVID-19 Needs to be Financially Inclusive and Gender Sensitive. Available at: https://www.afi-global.org/publications/why-the-economic-response-to-covid-19-needs-to-be-financially-inclusive-and-gender-sensitive/; and Alliance for Financial Inclusion. 2022. Closing the Financial Inclusion Gender Gap during the Crisis and Afterwards. Available at: https://www.afi-global.org/publications/closing-the-financial-inclusion-gender-gap-during-the-crisis-and-afterwards/

Indigenous woman selling wooden crafts in a tourist street in the center of town. Catacaos, Piura / Peru. (Alejandro Miranda / Alamy Stock Photo)

CONCLUSION

While the gender gap in account ownership reported by the World Bank Global Findex Database has fallen to six percentage points in 2021, meaning approximately 959 million women have been financially included since the Findex started in 2011, there is still significant progress to be made.

Financial regulators have a critical role to play in expanding women's financial inclusion, whether by direct action to address the constraints women face, promoting initiatives that drive financial product and service availability, uptake, and usage, or by influencing legal and societal contexts to support women's economic participation.

As a starting point, advocating for improved sex-disaggregated data collection and analysis at the public and private sector levels is key to support evidence-based policymaking and driving regulatory efforts. Beyond this, research has identified that, in general, efforts focused on improving women's access to mobile technologies and the internet, and those supporting more equitable social norms and a gender sensitive legal environment, are likely to have the strongest positive impact on driving women's financial inclusion.

Despite the progress in narrowing the gender gap in financial inclusion, significant research gaps remain. One critical gap is the need for more granular sex-disaggregated data, particularly on the usage and impact of financial products among diverse groups of women, such as those in rural versus urban areas, different age groups, and varying socioeconomic backgrounds. Comprehensive studies on the long-term effects of digital financial inclusion initiatives on women's economic empowerment and overall well-being are also lacking. Additionally, there is a need for research that explores the intersection of gender with other factors such as disability, ethnicity, and education to better understand and address the unique challenges faced by these subgroups.

Furthermore, in-depth analysis of the effectiveness of different regulatory and policy interventions in various cultural and socioeconomic contexts is essential to identify best practices and scalable solutions for promoting women's financial inclusion globally. Finally, future research should focus on understanding how to effectively shift from increasing access to deepening the use of quality financial products and services tailored to meet women's lifecycle needs and how this can lead to increasing their economic empowerment and potential.

In addition to the specific recommendations provided by group and by region as outlined above, regulators are invited to make use of this research and the accompanying case studies, to better understand the gaps in accelerating women's financial inclusion in their own enabling environments, learn from those jurisdictions demonstrating "accelerated" performance, and implement initiatives that are more efficient, innovative, and impactful. To compliment this landscape report, please refer to the summary report which covers all of the policy opportunities that can be taken forward as part of the next steps.

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AFAWA	Affirmative Finance Action for Women in Africa
AFI	Alliance for Financial Inclusion
CCX	ConsumerCentriX
CGAP	Consultative Group to Assist the Poor
CMIF	Central and South-Eastern Europe Microfinance Initiative
DFS	Digital Financial Services
FAS	Financial Accounting Standards
FI	Financial Institution
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GNI	Gross National Income
GSMA	Global System for Mobile Communications Association
ICT	Information and Communication Technology
ID	Identification
ID4D	Identification for Development
ILO	International Labour Organization
IMF	International Monetary Fund
ITU	International Telecommunication Union
KYC	Know Your Customer
MNOs	Mobile Network Operators
MSME	Micro, Small, and Medium Enterprises
NFIS	National Financial Inclusion Strategy
PCA	Principal Component Analysis
PPP	Purchasing Power Parity
SBS	Superintendencia de Banca, Seguros y AFP (SBS Perú)
SMEF	Small and Medium Enterprises Foundation
SMEs	Small and Medium-sized Enterprises
UN	United Nations
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNHDR	United Nations Human Development Report
UNSDG	United Nations Sustainable Development Goals
USSD	Unstructured Supplementary Service Data
WB	World Bank
WBES	World Bank Enterprise Survey
WMSME	Women-owned Micro, Small, and Medium Enterprises

ANNEXES

ANNEX 1 – OVERVIEW OF DATA AVAILABILITY BY AFI JURISDICTIONS

Country	ISO3	Findex 2021	Findex 2017	Sex-disaggregated supply-side data	Sex-disaggregated demand-side data
COUNT IF YES:		41	49	37	44
Armenia	ARM	Yes	Yes	No	No
Bangladesh	BGD	Yes	Yes	Yes	No
Cambodia	KHM	Yes	Yes	NA	NA
China	CHI	Yes	Yes	NA	NA
Costa Rica	CRI	Yes	Yes	Yes	Yes
Côte d'Ivoire	CIV	Yes	Yes	NA	No
Dominican Republic	DOM	Yes	Yes	Yes	Yes
Ecuador	ECU	Yes	Yes	No	No
Egypt	EGY	Yes	Yes	YES	YES
El Salvador	SLV	Yes	Yes	NA	Yes
Ghana	GHA	Yes	Yes	Yes	Yes
Guinea	GIN	Yes	Yes	NA	NA
Honduras	HND	Yes	Yes	YES	NA
Iraq	IRQ	Yes	Yes	No	No
Jordan	JOR	Yes	Yes	Yes	Yes
Kenya	KEN	Yes	Yes	No	Yes
Liberia	LBR	Yes	Yes	No	No
Malawi	MWI	Yes	Yes	NA	Yes
Malaysia	MYS	Yes	Yes	Yes	Yes
Mongolia	MNG	Yes	Yes	Yes	Yes
Morocco	MAR	Yes	Yes	Yes	Yes
Mozambique	MOZ	Yes	Yes	Yes	Yes
Namibia	NAM	Yes	Yes	NA	Yes
Nepal	NPL	Yes	Yes	Yes	No
Nigeria	NGA	Yes	Yes	Yes	Yes
Pakistan	PAK	Yes	Yes	YES	YES
Palestine	PSE	Yes	Yes	Yes	Yes
Paraguay	PRY	Yes	Yes	Yes	No
Peru	PER	Yes	Yes	Yes	Yes
The Philippines	PHL	Yes	Yes	Yes	Yes
Russia	RUS	Yes	Yes	NA	Yes
Senegal	SEN	Yes	Yes	NA	No
Sierra Leone	SLE	Yes	Yes	Yes	No
South Africa	ZAF	Yes	Yes	No	No
Sri Lanka	LKA	Yes	Yes	NA	Yes

ANNEXES

ANNEX 1 – OVERVIEW OF DATA AVAILABILITY BY AFI JURISDICTIONS

Country	ISO3	Findex 2021	Findex 2017	Sex-disaggregated supply-side data	Sex-disaggregated demand-side data
COUNT IF YES:		41	49	37	44
Tanzania	TZA	Yes	Yes	NA	Yes
Tunisia	TUN	Yes	Yes	NA	No
Uganda	UGA	Yes	Yes	Yes	Yes
Uzbekistan	UZB	Yes	Yes	No	NA
Zambia	ZMB	Yes	Yes	Yes	Yes
Zimbabwe	ZWE	Yes	Yes	Yes	Yes
Belarus	BLR	No	Yes	NA	Yes
DRC	COD	No	Yes	NA	Yes
Haiti	HTI	No	Yes	Yes	Yes
Lesotho	LSO	No	Yes	Yes	Yes
Madagascar	MDG	No	Yes	Yes	Yes
Mauritania	MRT	No	Yes	NA	No
Mexico	MEX	No	Yes	Yes	Yes
Rwanda	RWA	No	Yes	Yes	Yes
Angola	AGO	No	No	No	Yes
Bhutan	BTN	No	No	No	No
Burundi	BDI	No	No	Yes	No
Eswatini	SWZ	No	No	Yes	Yes
Fiji	FJI	No	No	Yes	Yes
Maldives	MDV	No	No	NA	Yes
Papua New Guinea	PNG	No	No	Yes	Yes
Samoa	WSM	No	No	Yes	Yes
São Tomé and Príncipe	STP	No	No	Yes	Yes
Seychelles	SYC	No	No	NA	Yes
Solomon Islands	SLB	No	No	Yes	Yes
Sudan	SDN	No	No	NA	No
Suriname	SUR	No	No	NA	No
The Gambia	GMB	No	No	Yes	Yes
Timor-Leste	TLS	No	No	Yes	Yes
Tonga	TON	No	No	No	Yes
Vanuatu	VUT	No	No	Yes	Yes

ANNEX 2 – OVERVIEW OF DATA SET COVERAGE BY COUNTRY

Category	Data source	Data indicator	Gendered?	# of countries with data (out of 171 total)	How many AFI countries? (out of 41)
2.1. Women's Financial Access and Usage	Global Findex	Deployed - overall indicators on access to finance	Yes	123	41
	Global Findex	Gendered indicators	Yes	123	41
2.2 Financial services infrastructure	IMF-FAS	Deployed - overall indicators on financial infrastructure	No	164	39
	IMF-FAS	Gendered indicators	Yes	40	12
2.3 ID infrastructure (Enabler 2)	ID4D	Deployed - overall indicators on ID ownership	No	171	41
	ID4D	Gendered indicators	Yes	139	18
2.4 ICT usage and infrastructure (Enabler 3)	GSMA	Deployed - overall indicators on mobile ownership	No	171	41
	GSMA	Gendered indicators*	Yes	N/A	N/A
	ITU	Deployed - overall indicators on internet usage	No	171	41
	ITU	Gendered indicators	Yes	100	23
	CCX elaboration	Proxy for women's phone ownership	Yes	171	41
		Proxy for women's access to internet	Yes	169	41
	a4ai	Affordability of mobile services and devices	No	166	41
	UNSDG	Percent of the population with access to electricity	No	171	41
3.1 Economic participation, inclusion, and entrepreneurship	ILO	Overall/gendered indicators on the labor force participation rate	Yes	171	41
	WBES	Overall/gendered indicators on business ownership	Yes	171	41
	SMEF	Percent of all SMEs that are owned by women	Yes	163	41
3.2 Skill development and educational attainment (Enabler 1)	UNESCO	Overall/gendered indicators on literacy	Yes	171	41
	UNESCO	Overall/gendered indicators on education	Yes	130	41
	WB&L	Gendered indicators on regulations and social norms affecting women	Yes	171	41

* GSMA Intelligence does not make the data publicly available, women's mobile phone ownership can be derived from public GSMA reports for a handful of countries altogether.

ANNEX 3 – STATISTICAL ANALYSIS

The first part of the analysis involves a multiple regression to uncover the significant key explanatory variables. This was followed by a discriminant analysis, which demonstrated how the countries can be classified based on the existing data.

ANNEX 3.1 – MULTIPLE REGRESSION ANALYSIS

Simple regression models were executed using key indicators, revealing strong overall correlations. However, the attempt to consolidate these indicators into a multiple regression model was unsuccessful due to interdependence among the independent variables in the multiple correlation. Multicollinearity, a statistical concept, arises when several independent variables within a model are correlated.

To address this issue, various factors were examined and established by grouping related indicators through **factor analysis**. This approach yielded independent indicator factors that were free from multicollinearity.

ANNEX 3.1.1 – PRINCIPAL COMPONENT ANALYSIS

Factor analysis is a statistical technique employed to explain the variance present in observed and correlated variables by utilizing a potentially smaller set of latent variables known as factors.

In summary, we have identified five primary factors which can be further categorized into nine statistically independent subfactors:

1. Access to mobile phones and the internet (one factor)
2. Labor force participation (two factors)
3. Women entrepreneurship (two factors)
4. Literacy, education (three factors)
5. Social norms (two factors)

These detailed factors were the following:

Two female customers use smartphone to pay their breakfast purchase at a street booth with Qr code payment. Shenzhen, China.
(Ylan / Alamy Stock Photo)

FACTOR 1. ACCESS TO MOBILE PHONES AND THE INTERNET

- Mobile ownership, GSMA
- Proxy for women's phone ownership
- Proxy for 'women's access to the internet

TABLE 9: FACTOR 1 - COMPONENT MATRIX[a]

	Component 1
Zscore (Mobile ownership, GSMA - IND137)	0.957
Zscore (Proxy for women's phone ownership - IND998)	0.946
Zscore (Proxy for women's access to the internet - IND999)	0.951

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

FIGURE 10. FACTOR 1

FACTOR 2. LABOR FORCE PARTICIPATION – FOUR VARIABLES, TWO DIFFERENT FACTORS (F1, F2)

- Labor force participation rate, female – F1
- Unemployment rate, female - F1
- Estimated earned income, female (2017 PPP dollars) - F2
- Women's earned income as % of men's - F1

TABLE 10: FACTOR 2 - ROTATED COMPONENT MATRIX[a]

	Component 1	Component 2
Zscore (Labor force participation rate, female — ILO100)	0.940	0.031
Zscore (Unemployment rate, female — ILO104)	-0.765	-0.078
Zscore (Estimated earned income, female (2017 PPP dollars) — GEN133)	0.026	0.998
Zscore (Women's earned income as % of men's — GEN146)	0.920	-0.050

Extraction Method: Principal Component Analysis.
Rotation method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

FIGURE 11. FACTOR 2

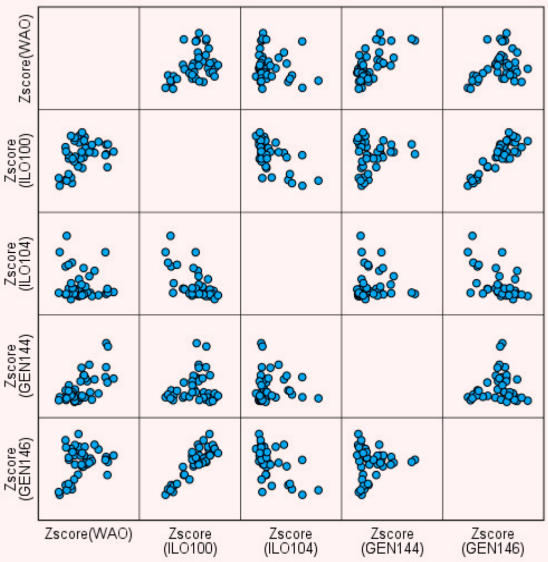


FIGURE 12. FACTOR 2

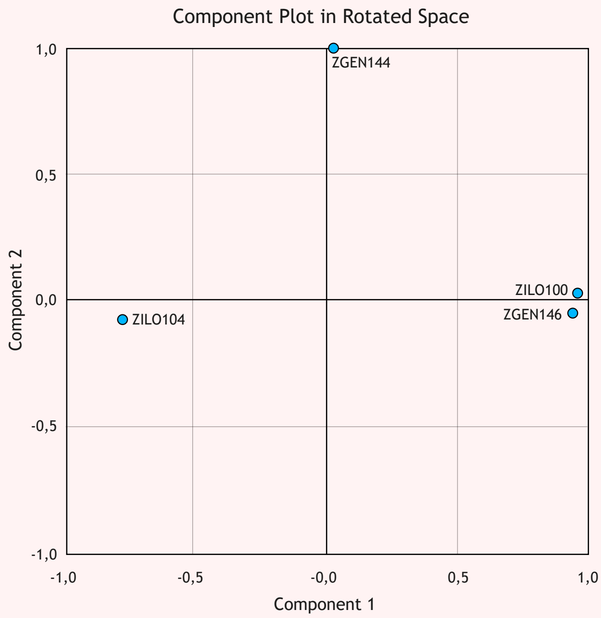


TABLE 11: FACTOR 2- MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std Error of the Estimate
1	,810[a]	,657	,646	13,19154%
2	,898[b]	,807	,795	10,05245%

a. Predictors: (Constant), Mobile Money Faktor 1
b. Predictors: (Constant), Mobile Money Faktor 1, F_LaborForce_2

FACTOR 3. WOMEN'S ENTREPRENEURSHIP – TWO FACTORS CREATED

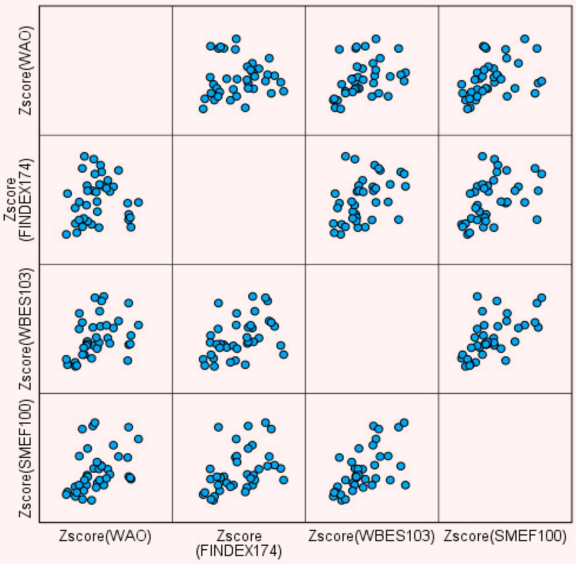
- Share of women receiving payments for self-employment
- Share of business with female participation in ownership
- Percent of all SMEs that are owned by women

TABLE 12: FACTOR 3 - ROTATED COMPONENT MATRIX[a]

	Component 1	Component 2
Zscore (Percent of all SMEs that are owned by women — SMEF100)	0.900	0.096
Zscore (Share business with female participation in ownership — WBES103)	0.182	0.980
Zscore (Share of women receiving payments for self-employment — FINDEX174)	0.844	0.256

Extraction Method: Principal Component Analysis.
Rotation method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

FIGURE 13. FACTOR 3



FACTOR 4. LITERACY, EDUCATION – TWO FACTORS

- Literacy rate, adult females
- Secondary education attainment - female
- Tertiary education attainment - female
- Gender gap in secondary education attainment
- Financial literacy

TABLE 12: FACTOR 4 - ROTATED COMPONENT MATRIX[a]

	Component 1	Component 2
Zscore (Literacy rate, adult females — WDI104)	0.880	-0.063
Zscore (Secondary education attainment - female — WDI101)	0.872	-0.049
Zscore (Tertiary education attainment - female — GEN147)	0.833	0.153
Zscore (Gender gap in secondary education attainment — WDI131)	-0.780	-0.175
Zscore (Financial Literacy — GEN151)	0.054	0.992

Extraction Method: Principal Component Analysis.
Rotation method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

FIGURE 14. FACTOR 4

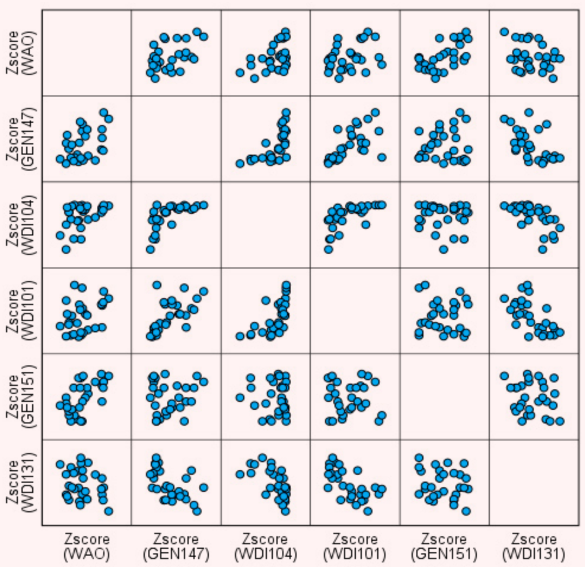
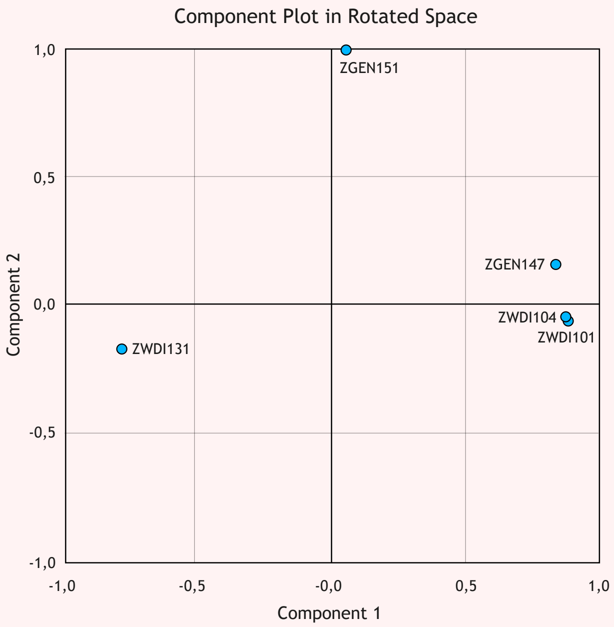


FIGURE 15. FACTOR 4



FACTOR 5. SOCIAL NORMS – TWO FACTORS

- Legal restrictions on women in the workplace
- Legal restrictions on women's ability to manage assets
- Legal restrictions on women in running a business
- Legal restrictions on women's mobility
- Legal restrictions on women's marriage

TABLE 13: FACTOR 5 - ROTATED COMPONENT MATRIX[a]

	Component 1	Component 2
Zscore (Legal restrictions on women in the workplace — WBL104)	0.504	0.559
Zscore (Legal restrictions on women's ability to manage assets — WBL101)	0.792	0.213
Zscore (Legal restrictions on women in Running a Business — WBL102)	0.022	0.939
Zscore (Legal restrictions on women's mobility — WBL103)	0.723	0.266
Zscore (Legal restrictions on women's marriage — WBL107)	0.939	-0.081

Extraction Method: Principal Component Analysis.
Rotation method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

FIGURE 16. FACTOR 5

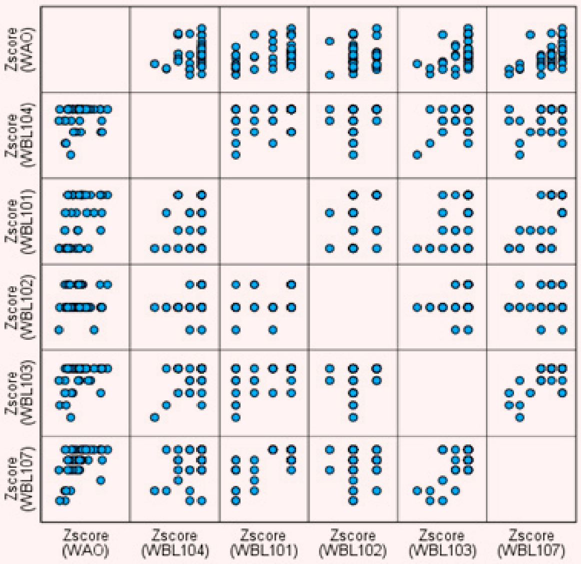
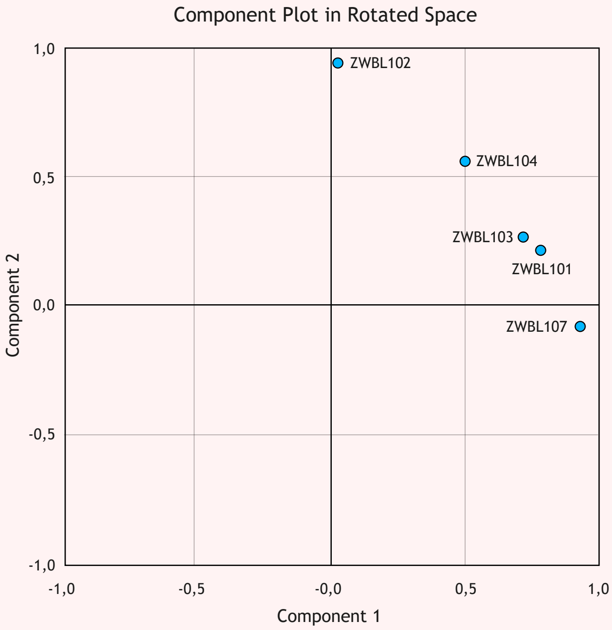


FIGURE 17. FACTOR 5



ANNEX 3.1.2 - MULTIPLE REGRESSION ANALYSIS WITH THE PCA CREATED FACTORS

Utilizing the PCA procedure, we systematically developed the multiple regression model, initially encompassing all factors. Through these factors, we explained the variance in the Women's Account Ownership (WAO) variable.

During the stepwise process, every step removed a predictor. Throughout the procedure, it is possible to track R^2, the adjusted R^2, and the value of the standard error of the estimation.

The analysis found that model no. 7 possesses the highest adjusted R^2 value, concurrently exhibiting the lowest standard error of estimation.

After these aforementioned steps, in the final model, the WAO variable can be explained by the following factors:

- Social norms_1, with a standardized coefficient of 0.203
- Wo_entrepenuer_2, with a standardized coefficient of -0.137
- Mobile money_1, with a standardized coefficient of 0.621
- Acces mobile factor_1, with a standardized coefficient of 0.368

A higher value of the WoEntrepreneur_2 factor (share of businesses with female participation in ownership) reduces the WAO value, while all other factors increase it. This reduction could potentially be attributed to a higher share of necessity entrepreneurs. Conversely, in more developed countries (with greater financial inclusion), fewer women are compelled to engage in survival entrepreneurship.

Model summary:

TABLE 14: COEFFICIENTS[a]

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std Error			
	Mobile Money Faktor 1	14,054	2.863	,621	4,909	<,001
	Acces Mobile Faktor 1	9,770	3,077	,368	3,175	,005
	F_WoEntrep_2	-3,314	2,829	-,137	-1,171	,257
	F_socialnorm_1	4,849	2,898	,203	1,673	,112

a. Dependent Variable: WAO

TABLE 15.

Model	R	R Square	Adjusted R Square	Std Error of the Estimate
1	,912[a]	,831	,691	13,37675%
2	,912[b]	,831	,714	12,85384%
3	,912[c]	,831	,735	12,39203%
4	,907[d]	,822	,739	12,29218%
5	,903[e]	,815	,745	12,14380%
6	,899[f]	,809	,753	11,96103%
7	,897[g]	,805	,762	11,74458%
8	,889[h]	,790	,757	11,85893%
9	,876[i]	,767	,744	12,16647%

a. Predictors: (Constant), F_socialnorm_2, F_LaborForce_2, F_socialnorm_1, F_Literacy_edu_2, F_LaborForce_1, F_WoEntrep_1, F_WoEntrep_2, Mobile Money Faktor 1, F_Literacy_edu_1, Acces Mobile faktor 1
b. Predictors: (Constant), F_socialnorm_2, F_LaborForce_2, F_socialnorm_1, F_Literacy_edu_2, F_LaborForce_1, F_WoEntrep_2, Mobile Money Faktor 1, F_Literacy_edu_1, Acces Mobile faktor 1
c. Predictors: (Constant), F_socialnorm_2, F_socialnorm_1, F_Literacy_edu_2, F_LaborForce_1, F_WoEntrep_2, Mobile Money Faktor 1, F_Literacy_edu_1, Acces Mobile faktor 1 d.
d. Predictors: (Constant), F_socialnorm_2, F_socialnorm_1, F_Literacy_edu_2, F_LaborForce_1, F_WoEntrep_2, Mobile Money Faktor 1, Acces Mobile faktor 1
e. Predictors: (Constant), F_socialnorm_1, F_Literacy_edu_2, F_LaborForce_1, F_WoEntrep_2, Mobile Money Faktor 1, Acces Mobile faktor 1
f. Predictors: (Constant), F_socialnorm_1, F_LaborForce_1, F_WoEntrep_2, Mobile Money Faktor 1, Acces Mobile faktor 1
g. Predictors: (Constant), F_socialnorm_1, F_WoEntrep_2, Mobile Money Faktor 1, Acces Mobile faktor 1
h. Predictors: (Constant), F_socialnorm_1, Mobile Money Faktor 1, Acces Mobile faktor 1
i. Predictors: (Constant), Mobile Money Faktor 1, Acces Mobile faktor 1
j. Dependent Variable: WAO

ANNEX 3.2 – VALIDATION OF THE SEGMENTS

Discriminant analysis constructs a predictive model for group membership, to classify objects or cases into different predefined groups or categories based on their features or attributes. The primary goal of discriminant analysis is to find a combination of predictor variables that best separates or discriminates between the groups.

This model consists of a discriminant function (or, in cases involving more than two groups, a set of discriminant functions) based on linear combinations of predictor variables that offer optimal differentiation among the groups.

Out of seven different categorization models, the one used in the report showed the strongest fit, with 96.2 percent of original grouped cases correctly classified based on the analytical factors (TBE).

TABLE 16: CLASSIFICATION FUNCTION COEFFICIENTS

	SEGM_code				
	1	2	3	4	5
F_LaborForce_1	.857	2,158	-,323	,615	-5,315
F_Literacy_edu_1	-3,130	-3,382	1,152	,431	3,138
Zscore (WAO)	16,131	7,019	-1,585	-4,846	-12,153
(Constant)	-15,194	-5,345	-1,930	-3,229	-12,890

Fisher's linear discriminant functions

FIGURE 18. CANONICAL DISCRIMINANT FUNCTIONS

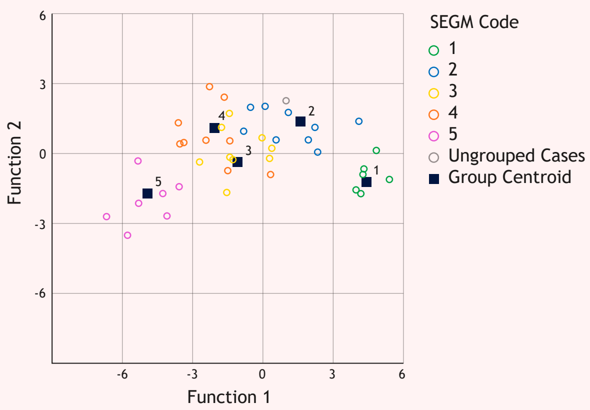


TABLE 17: CLASSIFICATION RESULTS[a]

		SegmD	Predicted Group Membership					
			1	2	3	4	5	Total
Original	Count	1	6	0	0	0	0	6
		2	0	5	0	0	0	5
		3	0	1	5	0	0	6
		4	0	0	0	5	0	5
		5	0	0	0	0	4	4
		Ungrouped cases	0	2	1	0	0	3
	%	1	100,0	,0	,0	,0	,0	100,0
		2	,0	100,0	,0	,0	,0	100,0
		3	,0	16,7	83,3	,0	,0	100,0
		4	,0	,0	,0	100,0	,0	100,0
		5	,0	,0	,0	,0	100,0	100,0
		Ungrouped cases	,0	66	33,3	,0	,0	100,0

a. 96,2% of original grouped cases correctly classified

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