

Making Digital Public Infrastructure Work for Women

The World Bank [Global Findex Database 2021](#)¹ reports a gender gap of 6% in account ownership across developing economies. While it is encouraging to see the gender gap fall from 9% over the last ten years, women still constitute a significant proportion of the unbanked population in low and lower middle-income countries.

Introduction

Global evidence across countries shows that leveraging core components of the overall financial ecosystem including payment infrastructure, digital identity, and data exchange in tandem with existing banking networks, provide an impetus to advance financial inclusion while also increasing usage and adoption of financial services. These core components or infrastructure enablers are referred to as Digital Public Infrastructure (DPI).

The cross-cutting issue of gender and women's economic empowerment along with DPI has been considered a vital theme of the India 2023 G20 Presidency. This encompasses promoting the expansion of financial services among unserved and underserved populations, of which women are a significant segment.

Many women face a number of challenges in terms of lack of formal identification, lower digital financial capability, limited access to smartphones, mobile network, women agents and formal credit, and socio cultural issues impacting their path to economic empowerment.

The onus of addressing these challenges falls on various stakeholders in the ecosystem including government, regulators, Financial Service Providers (FSPs), civil society and others. All can play a powerful role in prioritizing DPI and technological innovations that can level the playing field. The following section comprises suggested policy recommendations that leverage DPI to enable and advance women's economic empowerment through financial inclusion.

Recommendations for Policymakers

1. Prioritize the establishment of a national digital identity as the foundation of DPI. Track enrollment of women

Tracking the enrollment of women in a national digital ID program is recommended to improve the social and financial inclusion of unbanked and underbanked women. Improving women's overall access to bank accounts and the digital economy will also facilitate delivery of national social benefit payments. It may require the establishment of a national Digital Identification Authority, with a statutory legal backing to issue a country specific choice of digital ID technology (biometric, mobile, token-based) to women.

2. Prioritize the establishment of an interoperable Integrated Payment System. Track enrollment of women

Tracking enrollment of women under a national Integrated Payment System (IPS) is a DPI that will further financial inclusion of unbanked and underbanked women, by facilitating low value digital payments and remittances for women. Some examples include the Unified Payments Interface in India, PIX in Brazil, and wallet technology service providers in other countries such as Bangladesh that provide instant payment services. Since it is challenging to obtain gender-disaggregated data from an IPS, it is imperative that countries look at a gender responsive approach to drive usage among unbanked and underbanked women.

3. Build a national gender-disaggregated data reporting framework for FSPs. Implement national commitments to support women to determine whether DPIs are resulting in increased access and usage of financial services in a responsible way

The Global Findex Data 2021 shows a huge disparity between higher and lower-income countries in data management capabilities regarding aggregation, disaggregation, and sharing of gender-disaggregated data. It is important to establish a secure and centralized system along with standardized reporting protocols for gathering gender-disaggregated data.

This initiative would expand coverage and enhance the granularity of reported indicators, as well as foster coordination and harmonization of data management efforts. It would enable countries to understand how well they are currently serving men and women and empower regulators,

Policymakers and FSPs to identify and implement necessary actions that go beyond mere product uptake.

The reporting mechanism should seek to expand the data collected to include customer-level transactional indicators to highlight the uptake of financial products by women customers (e.g. deposit mobilization, microinsurance penetration, repayment rates, non-performing loan ratios, customer lifetime value, customer retention rates), as well as all relevant FSPs (e.g. bank and non-banks, insurers, fintech firms), in targeting women.

Similarly, supply-side indicators that measure women entrepreneurs' representation in an FSP's portfolio (e.g. share of accounts, outstanding loans held by women, share of transactions conducted by women), demonstrate their success at advancing gender parity in its customer base². Sharing such data across regulatory contexts can further spur competition among FSPs looking to reach underserved customers. Women's access to and usage of financial products will help inform policy and business decisions based on the business case of women customers.

4. Prioritize coverage and tracking of all eligible women in a national Universal Financial Inclusion Program

The [Global Findex Database 2021](#)³ by the World Bank reveals that 750 million women are still unbanked, while 250 million are underbanked. This data highlights the significant proportion of women who lack access to banking services, especially in low and lower-middle-income countries. Consequently, it is suggested to launch a national Universal Financial Inclusion Program (UFIP) to help close this gap and ensure women have access to essential financial services.

Basic Savings Accounts for Women

Holding a bank account confers a sense of status, identity and empowerment to women in addition to access to the formal financial system. A basic savings account serves as a base around which they can access other financial services and products, such as insurance, pensions and credit, to enhance social security and provide risk coverage for both individuals and their dependent households. Usage levels remain low among the low-income segment, especially among low-income women. Therefore, it is imperative to ensure that all women, including those who are socially excluded and residing in remote locations, have access to a basic savings account, preferably a zero-balance account, to foster a habit of periodic small savings. **See Box 1.**

5. Prioritize Digital Financial Capability among all eligible women in a country

Usage will only happen when individuals have the knowledge, trust and capability to transact – this is what we refer to as building Digital and Financial Capability (DFC). A strong DFC approach for low-income women and other unserved and underserved segments with in-built digital privacy protection is essential. Women are often less confident than men in using DPIs such as payment systems, ID systems and technology devices for the first time. For populations with lower levels of financial literacy, a user-friendly tech-touch approach is the starting point; human intervention along with technology is necessary to build trust and engagement. **See Box 2.**

The notion or concept of DFC having a positive impact on strengthening financial inclusion, inclusive finance, savings, and women's empowerment is [well researched](#)⁹ and [established](#)¹⁰ [globally](#)¹¹. Further, the [DFC and Financial Literacy frameworks](#)¹² by

Box 1: The Jan Dhan infrastructure in India has provided basic account access to 479 million people in India since its launch in 2014.

Countries can draw insights from Pradhan Mantri Jan Dhan Yojana (Jan Dhan)⁴ in India. To enhance the adoption and usage of this DPI-enabled initiative, particularly among low-income rural women, Women's World Banking launched an innovative savings solution – the 'Jan Dhan Plus'⁵ program with Bank of Baroda, the third largest public sector bank in India.

Jan Dhan Plus rests on four design principles:

- i) Encourage low-income women to start saving a small amount every month;
- ii) Make saving rewarding for women by highlighting how savings behavior can lead to opportunities for accessing micro-credit, insurance and pensions;
- iii) Build DFC of banking agents to make them more gender intentional and relationship oriented.
- iv) Conduct Information Education Communication campaigns for customers, primarily low-income women.

Jan Dhan Plus leveraged community-level Banking Correspondent Sakhis⁶ (women bank agents) of India's National Rural Livelihoods Mission⁷ program to reach remote areas. The pilots were successful with Bank of Baroda in both urban and rural contexts, leading to adoption by two more public sector banks, namely Indian Bank and Union Bank of India. Jan Dhan Plus has reached over 12 million women customers so far (April 2023).

Further, the savings engaged women customers are more valuable for the Bank as average balances increased by over 50% in just five months versus the entire portfolio over the same period. There was a twofold increase in the number of bank agents cross-selling micro-insurance and pension schemes, leading to double the enrollments during the pilot.

Jan Dhan Plus highlights the importance of savings-led engagement as a powerful tool to build financial resilience among low-income women and their households. According to a report by Women's World Banking and Bank of Baroda, it is estimated that by engaging 100 million low-income women in savings activities, public sector banks in India can attract approximately USD 3.1 billion in deposits.

organizations like [Women's World Banking](#)¹³ and [OECD-INFE](#) may be helpful in developing a comprehensive national strategy for financial education. It requires design of a country-specific assessment framework and strategy for DFC to target women in a phased manner in respective countries.

Further, Women's World Banking's [Women Digital Financial Inclusion \(WDFI\) Advocacy Hub](#) in partnership with UNCDF could be leveraged by countries to accelerate progress in Women's Digital Financial Inclusion. Under the WDFI Hub, stakeholders in key markets, through local coalitions of policymakers, FSPs and civil society organizations, focus on DFC to ensure the success of DPI efforts for women.

6. Support women's entrepreneurship by leveraging digital public goods and corporate commitments to enhance access to affordable credit, and increase market linkages

Enhance access to affordable credit for women

Women entrepreneurs face challenges in accessing credit compared to their male counterparts. Despite accounting for 28% of all Micro, Small, Medium Enterprises (MSMEs) in developing economies¹⁶, women account for 32% of the MSME credit gap. Moreover, self-employed women are more likely to exclude themselves from the credit market compared to self-employed men¹⁷.

In 2020, women-led startups received only 2.3% of global venture capital funding, a decrease from 2.8% in 2019. Credit guarantee schemes for MSMEs are overwhelmingly bank-based and intermediated, excluding FSPs such as fintech lenders, supply-chain finance providers and MFIs. An emphasis on banks disadvantages women MSMEs who often have limited relationships with commercial banks.

Box 2: Designing Digital Remittance Solutions for Domestic Workers in Indonesia¹⁴

To develop a digital remittance solution for domestic workers to safely send money to their families and increase their engagement with formal financial services, Women's World Banking partnered with DANA¹⁵ Indonesia, one of Indonesia's largest digital wallet providers, on a five month pilot. During the initial assessment, barriers to adoption were identified for low-income domestic workers. Namely, a complex sign-up process, poor access to the internet, a complex app interface, lack of trust in e-money or digital cash and fear of making errors due to lack of understanding of digital financial services.

A five-part solution for e-wallet services was designed for DANA Indonesia users to build their trust and confidence in DANA as a remittance service. Efforts were made to drive adoption by offering tutorials to support those with limited digital financial literacy and through i) Program pitch and onboarding, ii) Transaction tutorials, iii) Key customer marketing, and messaging, iv) Timely notifications and reminders, and v) Incentives.

The solution was piloted throughout Indonesia for DANA's users. The final phase showed a substantial increase in usage of DANA as a remittance service by domestic workers. Key learnings included:

- i) Program awareness and targeted messaging effectively communicates the benefits and convenience of using DANA.
- ii) While employers offered limited support to facilitate the onboarding of domestic workers, a segment of tech-savvy workers sought tutorials and videos independently, and others learned with the support of family members and peers.

Overall, DANA was perceived as a fast, easy, and secure transfer method instilling confidence in its use for remittances. Customers who participated in the program started using DANA for bill payments, online shopping, and using a savings goal feature called DANA Goals. The solution helped build the DFC of workers through a learn-by-doing approach coupled with technological support of reminders and built-in incentives to drive usage. This is testament to how private sector innovation and financial technology can provide a people-centered solution to realizing an inclusive digital economy.

Box 3

The Open Credit Enablement Network (OCEN) is an emerging digital public good that has potential to democratize and transform India's digital lending landscape. Designed as a framework of Application Programming Interfaces (APIs), OCEN can be integrated with a wide range of e-commerce websites, digital marketplaces, and other apps. It aims to empower individuals and MSMEs who are not part of a formal credit system by directly delivering financial products to them, thereby eliminating dependence on traditional lenders. OCEN can also be used by non-bank small-scale lenders.

The Credit Guarantee Corporation of Cambodia (CGCC) launched a Public Credit Guarantee Scheme for SMEs and Women-Owned SMEs in 2021. This is a great example of a Credit Guarantee Scheme with a special focus on women MSMEs. Although women own 61% of businesses in the country, only 3% have access to formal credit (WB, 2019). Launched in early 2021, CGCC is tasked with the mission to provide a credit guarantee and thus promote inclusive access to affordable finance to women-owned enterprises.

Nacional Financiera (NAFIN) is a Mexican Development Bank focused on contributing to the economic development of Mexico by facilitating MSMEs with special attention on youth and women, and priority investment projects access to financing and business development services. It also contributes to the formation of financial markets, and acts as trustee and financial agent of the Federal Government.

The CGTMSE scheme in India offers a guarantee that encompasses loans provided to enterprises involved in manufacturing, services, retail trade, and educational/training services. The extent of guarantee coverage varies, ranging from 85% for micro enterprises, women enterprises, and enterprises in aspirational districts, among others, to 75% for small enterprises. Over the past few years, the scheme has undergone significant transformations. These include enabling collateral-free credit, incorporating Non-Banking Financial Companies (NBFCs) and Microfinance Institutions (MFIs), encompassing retail trade as an acceptable activity, enhancing the CGTMSE portal, and aligning the interest rates of individual credit facilities with RBI guidelines. Moreover, the CGTMSE team collaborates with State Government bodies to directly disseminate the benefits of CGTMSE to women entrepreneurs and other potential MSME segments at the grassroots level.

To address these issues, central banks and policymakers should consider establishing a national digital credit platform or network that promotes inclusivity. It should specifically target women MSMEs who struggle to access formal institutions or obtain favorable interest rates. By directly connecting entrepreneurs with loan providers, a national credit network can democratize affordable credit and enable MSMEs to participate in the formal financing system. It should be built on an open protocol infrastructure and provide standardized tools representing different components of the lending process. This would allow entities such as apps, marketplaces and aggregators to integrate lending seamlessly into their existing operations.

Further, the design of an effective credit guarantee program should ensure that the guarantee is used in lieu of collateral and as a credit enabler.

For women MSMEs, a higher guarantee coverage may be considered to increase participation. Opening up credit guarantee schemes to digital financial services providers with more experience in automated underwriting and use of alternative data sets can help reach women MSMEs with credit guarantees beyond those with immovable collateral. **See Box 3.**

7. Design a gender E[quality]-Commerce¹⁸ Program and provide corporate incentives for online procurement from women suppliers

Countries may consider designing a gender E[quality]-Commerce Program to help women MSMEs sell on e-commerce platforms and provide corporate incentives for online procurement from women suppliers.

Countries may consider gender-responsive public procurement practices, (for example, ensure gender equality in the purchase of supplies and services for public sector agencies), announce an ambitious commitment to establish gender equity as a priority for procurement policies, and set related targets on the value of gender-responsive procurement.

Additionally, countries could establish a gender-responsive Sourcing Advisory Facility to provide women MSMEs with training on selling through e-commerce platforms and fulfilling online contracts. The Facility could also partner with e-commerce platforms and private companies to address gender gaps in procurement through financial support for supply chain gender diagnostics, identifying women suppliers, and implementing gender-responsive sourcing best practices. **See Box 4.**

8. Join Gender-Intentional Leadership and Diversity Programs for Policymakers to design DPIs with a gender lens

Gender-neutral approaches to designing policy around DPI and digital financial services can unintentionally introduce bias and fail to serve the needs of women and other underserved segments. Women's contexts differ. DPIs must be designed with gender intentionality; if we design with women in mind, we design for all.

In order to yield the best outcomes, policymakers could actively consider promoting women's leadership within their institutions. Recognizing the importance of diverse perspectives,

Box 4

India's online public procurement marketplace – the Government eMarketplace (GEM) – has undertaken several efforts under its “Womaniya” initiative to promote women entrepreneurs. These include categories for products made by women entrepreneurs, filters to identify such products, and new tailoring services to enable women tailors to supply to local public agencies¹⁹. 140,000 women entrepreneurs have registered on the platform since 2019, fulfilling orders worth \$2.6 billion²⁰.

The Open Network for Digital Commerce (ONDC) allows buyers, sellers, and vendors to access each other across e-commerce platforms, eliminating the need for parties to be on the same platform to transact and exchange goods and services. This is an example of DPI that expands market linkages for women entrepreneurs such as members of Kudumbashree, a women's self-help group in the Indian state of Kerala, that have joined the ONDC platform to sell their products to buyers across the country²¹.

Recognizing the importance of diverse perspectives, these institutions can also participate in gender-intentional leadership and diversity programs delivered by organizations like [Women's World Banking](#). **See Box 5.** Additionally, engaging with [The IMF Institute for Capacity Development](#) can provide valuable insights for inclusive growth and structural policies, further enhancing the refinement of policy reforms and design of DPI.

Box 5

Women's World Banking Leadership and Diversity Program is a global leadership program for senior officials from central banks and regulators and high-potential women leaders from their respective institutions. Each senior official identifies a gender inclusive policy initiative to sponsor at their institution related to serving the women's market, and works with their high-potential woman leader to implement it, while simultaneously supporting her professional leadership development during and after the program.

Acknowledgments

This policy brief was a collaborative effort between Women's World Banking employees, namely, Ajit Agarwal, Policy Lead South Asia, and Francesca Brown, Director of Global Policy and Advocacy.

Women's World Banking is deeply grateful for the Bill & Melinda Gates Foundation's investment in our work to advance women's financial inclusion in India

Note

Most of the evidence reflected in this brief stems from Women's World Banking's work in the context of the G20 Global Partnership for Financial Inclusion' focus on Digital Public Infrastructure during the 2023 G20 India Presidency. Women's World Banking's long-term experience working together with Indian FSPs and policymakers enables unique insights. Given that experience from a number of other countries points to similar trends, we are confident that designing DPI with women in mind will lead to similar impacts in other environments outside India.

References

1. <https://www.worldbank.org/en/publication/globalindex>
2. Data2X, Gender Data for Financial Inclusion, 2022
3. <https://www.worldbank.org/en/publication/globalindex>
4. <https://pmidy.gov.in/>
5. Case study provided by Women's World Banking: Making Jan Dhan Work for Women, 2022; [The Power of Jan Dhan- Making Finance work for Women in India, 2021](#)
6. BC Sakhis are community-based banking agents under the India government's National Rural Livelihoods Mission which encourages states to identify one woman per village from existing self-help-groups to become a BC Sakhi.
7. <https://daynrlmbl.aajeevika.gov.in/HomePage.aspx>
8. Digital financial capability is defined as the knowledge, attitudes and skills that enable a person to actively use digital financial services. Interventions that aim to build women's digital financial capability are critical to ensuring that women are able to adopt and effectively use digital financial services. The focus on building capability reflects an emphasis on driving behavior change, through the investment in and development of knowledge, attitudes, and skills.
9. Hasan, M., Le, T. and Hoque, A., 2021. How does financial literacy impact on inclusive finance? Financial innovation, 7(1), pp.1-23.
10. <https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=1156#CH1>: RBI National Strategy for Financial Education: 2020-2025
11. [OECD and its International Network on Financial Education \(INFE\)](#)
12. <https://www.womensworldbanking.org/insights/leveraging-digital-financial-capability-to-drive-womens-financial-inclusion/>
13. https://www.womensworldbanking.org/wp-content/uploads/2021/03/WWB_DFC-Report_2021.pdf
14. Case study provided by Women's World Banking: <https://www.womensworldbanking.org/insights/designing-digital-remittance-solutions-for-domestic-workers-in-indonesia/>; <https://www.womensworldbanking.org/insights/how-digital-wallets-are-transforming-remittances-as-an-entry-point-for-domestic-workers-into-formal-financial-services/>
15. [DANA](#)
16. OECD, Do women have equal access to finance for their business? 2017
17. Crunchbase, Global VC Funding To Female Founders Dropped Dramatically This Year, 2020
18. Inputs from G20 Empower 2023 – Financial Inclusion and Business Acceleration (FIBA) Working Group
19. PIB, GeM holds event to commemorate success of Women entrepreneurs on GeM, 2023
20. Financial Express, 1.44 lakh women entrepreneurs have fulfilled 14.76 lakh orders on GeM since 2019: Govt, 2023
21. Indian Retailer, Kudumbashree Associated Sellers Join the ONDC, Aims to Expand Regional Presence, 2023
22. CGTMSE India Case study: <https://www.cgtmse.in/>