



### **RBIH Exclusive Insights**

# Her Digital Gateway: How women in India access and use smartphones



Powering Financial Inclusion for Women in India: Smartphone Ownership and Usage



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#### **CEO's preface**



India is on an upwards trajectory to make digital financial services (DFS) accessible, especially among the underserved segments. The rise in smartphone ownership is a catalyst for financial service providers to develop innovative solutions that suit the differentiated needs of various user segments. However, the growth in smartphone ownership and mobile internet use has been unequal among men and women in India. Despite the rise in smartphone access among women, internet access and active use of mobile phones remain limited. As per a study, 54% of women have access to mobile phones, but only 33% use the internet.

While shared access to devices and limited digital literacy are some of the vital factors that impact women's access to smartphones and their use, several enablers and barriers persist at the individual, household, and ecosystem levels. The gender gap in smartphone use widens as fewer women use mobile phones for financial transactions, especially in rural and remote areas. Financial institutions (FIs) currently have limited sources of gender-disaggregated data, which hinder their ability to understand this digital divide and build innovative DFS products for women.

At the Reserve Bank Innovation Hub (RBIH), we recognise the need to develop resources to help FIs build gender-inclusive and gender-intentional products and processes. This report provides an overview of the financial preferences, needs, and goals of women smartphone users. Developed in collaboration with MSC (MicroSave Consulting), it offers critical insights into the factors that limit women's smartphone use to non-financial services. For this report, we engaged with more than 3,300 women across five states in India—Maharashtra, Karnataka, Uttar Pradesh, Odisha, and Assam.

The insights from this report can help FIs understand the relevance and gaps in current products and services and design gender-intentional solutions for women smartphone users. We invite banks, fintechs, technology service providers, and other ecosystem stakeholders to engage with this report and join us in the endeavour to bridge the gap in DFS adoption among women in India.

#### **Rajesh Bansal**

Chief Executive Officer
Reserve Bank Innovation Hub

#### **List of abbreviations**

Abbreviation	Full form				
ATM	Automated teller machine				
BC agent	Business correspondent agent				
BNPL	Buy now, pay later				
DFS	Digital financial services				
DPA	Digital payment apps				
FinTech	Financial technology				
Fls	Financial institutions				
INR	Indian Rupee				
кус	Know your customer				
LIC	Life Insurance Corporation of India				
MFI	Microfinance institution				
NGO	Non-government organisation				
OECD	Organisation for Economic Co-operation and Development				
OTT Applications	Over-the-top applications				
P2M	Person-to-merchant				
P2P	Person-to-person				
PM-JAY	Pradhan Mantri Jan Arogya Yojana				
PMJDY	Pradhan Mantri Jan-Dhan Yojana				
PMJJBY	Pradhan Mantri Jeevan Jyoti Bima Yojana				
PPI	Prepaid payment instrument				
SIP	Systematic investment plan				
SHG	Self-help group				
ТРВ	Theory of planned behaviour				
UI	User interface				
UPI	Unified Payments Interface				
UTAUT2	Unified theory of acceptance and use of technology				

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#### **Executive summary**

Digital financial services (DFS) have grown phenomenally over the past decade in India. The increased adoption of mobile phones, affordable data rates, and growing comfort in using smartphone-based technology and applications have enabled service providers to design innovative solutions across user segments. The evolution of India's DFS landscape can lead to better economic, social, educational, and health outcomes for individuals and households. However, the gender gap in mobile phone ownership and mobile internet use limits the equitable realisation of benefits from DFS.

Women in India are 40% less likely to own a smartphone than men. Despite the rise in women's access to mobile phones to 54% in 2024, only 33% of women smartphone users have used the internet. The gender gap widens in DFS adoption due to various demand-side and supply-side barriers. Gender-disaggregated data with granular details of women smartphone users' financial habits, preferences, and goals can help FIs design gender-intentional financial products. This would help contextualise the factors shaping DFS adoption among women, including the extent of access to shared smartphones, financial management practices, and the gaps in current financial services.

The research provides insights into how women in India use and navigate smartphones to avail of financial and non-financial services. We interviewed 3,300 women users with independent and shared access to smartphones across five Indian states to understand their user journey. The respondents were from Maharashtra, Karnataka, Uttar Pradesh, Odisha, and Assam.

The report provides insights on the key enablers and barriers that impact women's smartphone user journey. Some of the key insights are highlighted below:

# Ability of women users to access and use smartphones

 Women smartphone users with limited digital skills face language-related issues when they download mobile applications or upload and share content: As per the research, 82% of women smartphone users are proficient in

- reading vernacular languages. In comparison, less than 25% of women are comfortable with English in mobile applications.
- New-to-internet women smartphone users seek assistance from family members and video tutorials to learn about services: 42% of women smartphone users use video tutorials to access and use DFS, and 58% of women learn from their friends and family. Some women use speech-to-text software to search for relevant videos and overcome language barriers.

# Factors that influence the decision to adopt DFS

- Women smartphone users who actively use digital payments perceive it as a critical tool that improves convenience, reduces transaction costs, and helps manage finances: 81% of women who actively use digital payments stated it enhances the convenience and ease of payments to merchants and peers, 77% said it saves time and effort, and 65% stated digital transactions help track finances easily.
- Women with seasonal or volatile incomes seek digital savings products with flexible payment schedules: 43% of women with a personal income are engaged in agriculture or freelance work that often has erratic payment schedules. Further, the level of savings among 32% of women with access to only household income varies based on monthly household expenses. Women users need digital savings products that account for income volatility and have limited barriers to opt-in or opt-out each month.
- Rural women seek digital credit products that offer assistance in the application and onboarding process, and are situated within existing social structures: Our research shows that women in urban areas are more willing to experiment to avail of credit and savings online. In contrast, 65% of women in rural areas prefer credit products within existing social structures, such as microfinance institutions (MFIs), and self-help groups (SHGs). Digitisation initiatives by MFIs and SHGs have encouraged some women

to repay digitally. Rural women are inclined to avail themselves of digital credit products that account for their limited mobility and help with onboarding.

# Adoption patterns for DFS among women smartphone users

- 60% of women smartphone users avail of digital financial services through their devices and focus mainly on digital payment services, namely UPI and PPI wallet applications. In contrast, over 85% of their male counterparts avail of DFS products and services. This gap persists for a few reasons, which mainly include higher active outward remittances conducted by men, including migrant labourers, and a higher degree of men's involvement in making household expenditures across various payment categories. On the other hand, the user uptake of other DFS products remains low, at around 15% for app-based credit and about 5% for savings and insurance apps.
- Lack of digital skills to complete KYC process:
   Many FinTech platforms, such as DigiLocker,
   have integrated their KYC models into their
   platforms. This integration makes the KYC
   process seamless and convenient for literate
   user segments. However, it overwhelms the less literate user segments, as they prefer to provide
   documents manually and refrain from signing
   onto such platforms to avail of such services.
- Preference towards financial products with short lock-in period: Most low—and moderateincome women with volatile incomes anticipate a liquidity crunch in the future. As a result, they seek to invest in products that do not expose them to a lock-in period. While many DFS applications provide their users with investment products without lock-in terms, 65% of women users were unaware of them.

# 1 Setting the context





#### Introduction

Digital financial services (DFS) have grown phenomenally over the past decade in India. The rise in digital payments is a key growth driver for DFS in India, with a compound annual growth rate of 44% by volume and 11% by value between 2017-18 and 2023-241. The increased adoption of mobile phones, affordable access, and growing comfort in using smartphone-based technology and applications have enabled service providers to design innovative solutions across user segments. As of December 2023, India had more than 820 million internet users, which is expected to exceed 1 billion users by 2026.2 The evolution of India's DFS landscape has the potential to improve economic, social, educational, and health outcomes for individuals and households. However, the existing gender gap in mobile phone ownership and mobile internet use may hinder the equitable realisation of these benefits from DFS.

Women in India are 40% less likely to own a smartphone than men.<sup>3</sup> Despite the rise in women's access to mobile phones to 54% in 2024, only 33% of women smartphone users have used the internet.<sup>4</sup> The gender gap widens in DFS adoption due to various demand-side and supply-side barriers. On the demand side, women lack sole ownership of smartphones and formal financial documents, face societal and cultural constraints, and have limited digital and financial literacy.<sup>5</sup> On the supply side, FIs conduct market research that lacks a gendered lens, design DFS products that may be unsuitable to women's financial needs, and adopt delivery channels with limited assistance for women users who lack digital and financial literacy.<sup>6</sup>

Gender-disaggregated data with granular details of women smartphone users' financial habits, preferences, and goals is crucial for FIs aiming to design gender-intentional financial products. By understanding the specific financial behaviors and needs of women, FIs can create products that are more relevant and accessible. This data helps in identifying the unique challenges women face, such as limited access to smartphones and formal financial documents, and the societal and cultural constraints that impact their financial decisions. Additionally, insights into women's financial management practices and their comfort levels with digital tools can guide the development of user-friendly DFS products that cater to their specific requirements.

Furthermore, this detailed data allows Fls to contextualize the factors that shape DFS adoption among women. For instance, understanding the extent of access to shared smartphones can highlight the need for easy-to-use and secure products, even when devices are shared. It also sheds light on the gaps in current financial services, such as the lack of tailored financial education and support for women. By addressing these gaps, Fls can enhance the overall financial inclusion of women, ensuring that they have the tools and knowledge to manage their finances effectively. This approach benefits women and contributes to the broader goal of creating a more inclusive and equitable financial ecosystem.

#### **Research objectives**

Reserve Bank Innovation Hub (RBIH) commissioned MicroSave Consulting (MSC) to understand how women smartphone users access and use the device for financial and non-financial services. The research has been conducted with the aim to:

- Assess the ownership and extent of access to owned and shared smartphones among women at the individual and household levels.
- Understand the current awareness, usage, and ability among women to use mobile phones for financial and non-financial services. Financial services include understanding how women save, spend, borrow, and plan their finances. Non-financial services include how women access information and communicate using mobile internet (including social media platforms, messaging applications, and others).
- Identify the anchor use cases that can help FSPs design digital financial products and services suited to women's needs. This includes payments, lending, savings, insurance, and other financial services.

#### Research methodology

The research provides insights into how women in India use and navigate smartphones to avail of financial and non-financial services. The research deploys mixed method research, including qualitative and quantitative interviews with women smartphone users. (Figure 1)

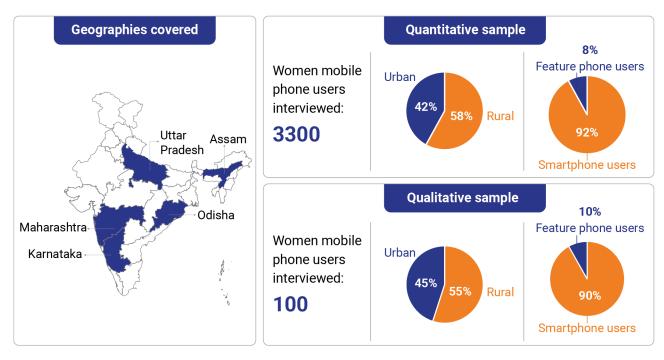


Figure 1: Overview of sample covered for the research

We interviewed 3,300 women users with independent and shared smartphone access across five Indian states to understand their user journey. The states were selected through purposive sampling to ensure representation across five geographic zones, focusing on regions with a higher population of women. The respondents were from Maharashtra (West), Karnataka (South), Uttar Pradesh (North), Odisha (East), and Assam (Northeast). The sample size includes each state's urban, peri-urban, and rural areas.

In the sample, 90% are smartphone users and 10% are feature phone users. We have included feature phone users to understand the potential barriers they may face when they access DFS solutions and their use once they shift to smartphones.

# Using the ADAPT framework: Key insights on women smartphone users' journey and recommendations for FIs to design gender-intentional DFS products

This report's research tools and analysis framework are based on theoretical models that explain the

factors that affect users' adoption and behaviour when they adopt new technologies. We have combined elements from these theoretical models to develop the ADAPT framework for the factors that shape DFS adoption among women smartphone users. (Figure 1) We have adopted elements from two theoretical models to develop the ADAPT framework: The Theory of Planned Behaviour (TPB) and the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2)7. The TPB model provides insights into an individual's behavioural intentions to adopt DFS, and the UTAUT2 model explores the factors that influence the adoption of new technology, ease of adoption, and key use cases. The ADAPT framework includes the key elements from these two models that can help understand the enablers and barriers to DFS adoption among women smartphone users.

The ADAPT framework first maps women smartphone users' journey, followed by a blueprint for ecosystem players to design gender-inclusive DFS products: (Figure 2)

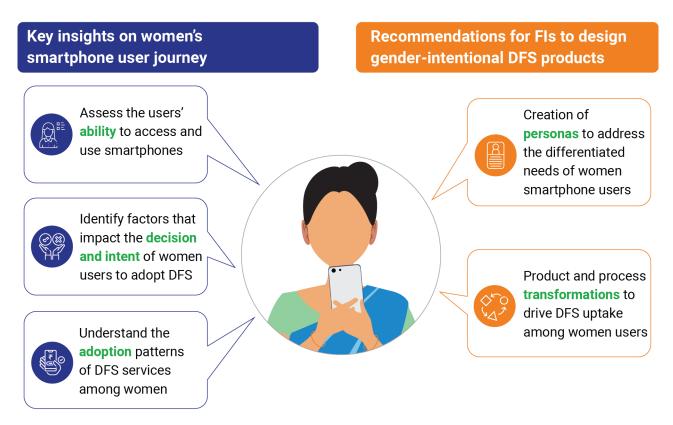


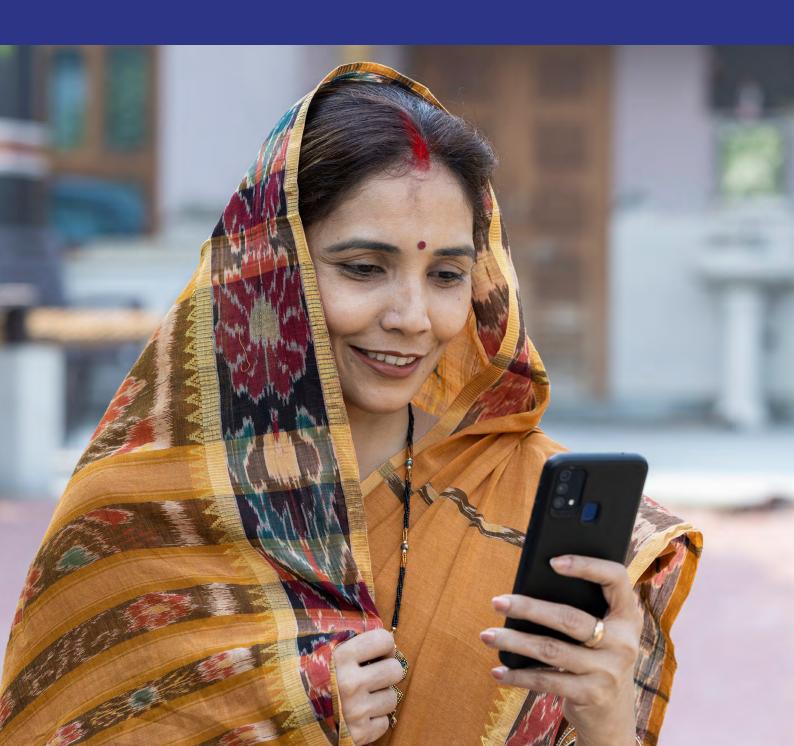
Figure 2: Analysis framework to assess and improve women's smartphone usage

- 1. Key insights on women's smartphone user journey: This includes the key enablers and barriers that affect the journey of women smartphone users as they graduate from being non-users of smartphones to regular DFS users. This includes assessing women users' ability to access and use smartphones, identifying factors that impact their decision-making process, and understanding the DFS adoption patterns for women smartphone users. The users' ability to access and use smartphones for DFS depends on their digital skills and financial readiness. To identify the key factors that impact the decision-making process involved in using DFS, this report looks at women smartphone users' perception of the benefits and risks of using DFS, and the impact of social and cultural norms. To understand the adoption patterns of DFS among women smartphone users, this report maps their journey from basic to advanced use of their smartphones for both financial and nonfinancial services.
- Recommendations for FIs to design genderintentional DFS products: The user journey of women smartphone users accessing and using DFS varies based on their financial needs, preferences, and goals. Further, it varies based

on their digital readiness. Based on the user journey mapped in the above section, personas have been developed to help FIs identify the key gaps within each segment. This would help FIs identify the current gaps in their service offerings to ensure their products are gender inclusive. Additionally, this section provides a list of product and process improvements to improve the user experience of women smartphone users. These recommendations are mapped to each stage of the user journey and aim to resolve the key impediments women smartphone users face. The key stages include the discovery and onboarding of a DFS product, active use of DFS, and supported through a robust grievance redressal process. This would help FIs to develop a simple and intuitive user interface, and help women smartphone users to progress towards active use of DFS.

The insights from this research provide a comprehensive overview of women smartphone users' journey to help ecosystem players identify the gaps in their current DFS products and improve their service offerings.

# 2 Key insights on women's smartphone user journey



# 2.1. Assessing the ability of women users to access and use smartphones

Once a woman owns a personal or shared smartphone, she explores and uses services based on her digital and financial access, skills, and literacy. This section assesses and segments women smartphone users based on their current digital and financial readiness levels. These aspects are pivotal to understanding smartphone users' ability to navigate financial and non-financial services.

# 2.1.1. Digital readiness of women smartphone users

To understand the journey of women smartphone users from owning a smartphone to regularly using DFS, it is critical to understand their current digital capabilities. Their level of digital readiness depends on access to a shared or personal smartphone, the affordability of the device and internet services, and their level of digital skills. These factors vary based on the specific circumstances of the individual, their household, and the broader ecosystem that supports their smartphone usage for financial and non-financial services. (Figure 3)

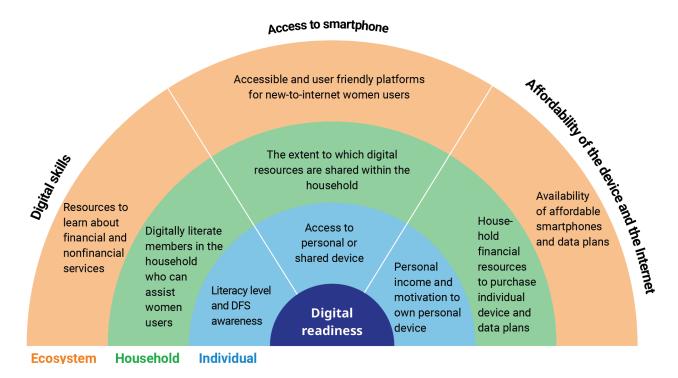


Figure 3: Key factors that impact digital readiness of women smartphone users

- i. Shared smartphone users who aspire to own a personal device find it difficult to prioritise a smartphone purchase due to its high cost, household financial constraints, and lack of personal income. Purchasing a personal smartphone is a substantial expense, especially for low-income households. As per the research, 76% of women with shared smartphones lack personal income, 58% stated smartphones are expensive, and 47% cited household financial constraints as the reason for not having a personal smartphone. Their financial constraints include volatile income, recurring household expenses, and ongoing loans.
- ii. Shared smartphone users have limited time and opportunities to experiment with app-based financial and non-financial services: Access to shared devices often does not coincide with women's leisure time when they can use the smartphone to experiment with new services and use them. As per the research, 66% of women with shared smartphones spend less than two hours on their smartphones, while 68% of women with personal smartphones spend two to five hours using them. As a result, women with shared smartphones are less likely to experiment with financial and non-financial services and rely on the primary smartphone user to access services.

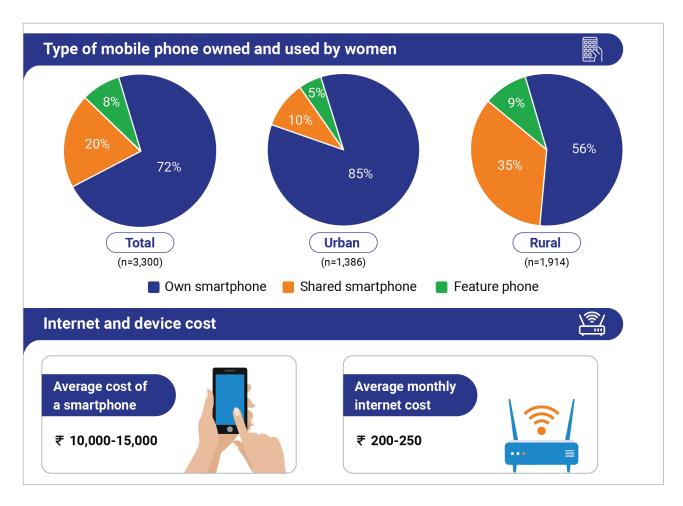


Figure 4: Digital readiness among women smartphone users

- iii. Women smartphone users with limited digital skills face language-related issues when they download mobile applications or upload and share content: As per the research, 82% of women smartphone users are proficient in reading vernacular languages. In comparison, less than 25% of women are comfortable with English in mobile applications. However, most women continue to use mobile applications in English as they lack awareness of the range of vernacular languages they can use to access financial and non-financial services.
- iv. New-to-internet women smartphone users seek assistance from family members and video tutorials to learn about services: 82% of women with smartphone access for less than two years regularly depend on family members and peers to learn how to download and navigate mobile applications. Once they learn how to place calls, send messages, and download applications, some of them progress towards using DFS. In this research, 42% of women smartphone users use video tutorials to access and use DFS, and 58% of women learn from their friends and family. Some women use speech-to-text software to search for relevant videos and overcome language barriers.

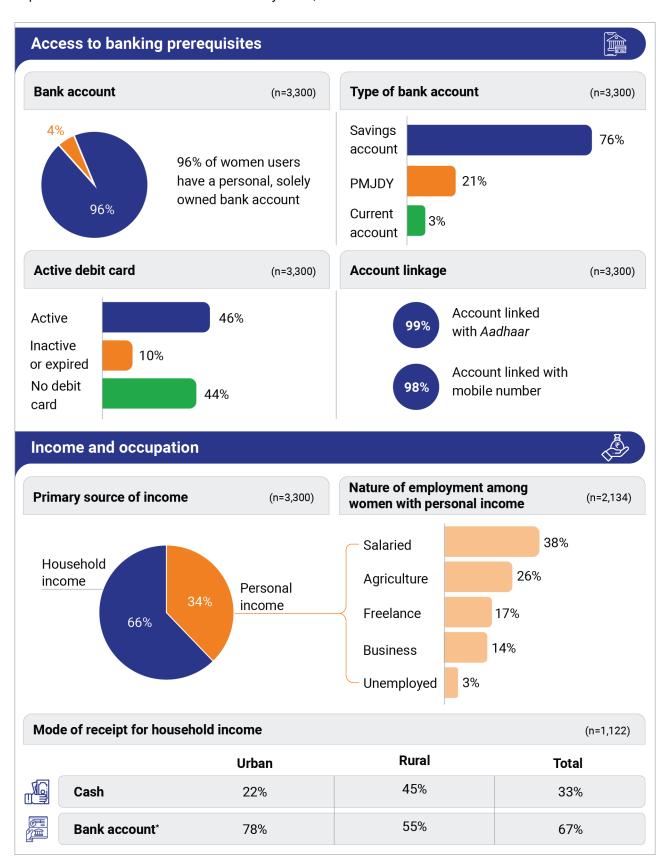


Jagriti, a 32-year-old vegetable seller from Pune, Maharashtra, purchased her first smartphone three years ago. She began using WhatsApp to communicate with her peers and video call her relatives. A year later, she wanted to use digital payments to accept customer payments. Since she regularly used speech-to-text facilities on YouTube, she looked up videos to learn how to onboard and manage her finances online.

# 2.1.2. Financial readiness of women smartphone users

The financial readiness of women smartphone users depends on access to formal financial systems,

access to personal or household income to conduct financial transactions and an active role in household financial decisions. (Figure 5)



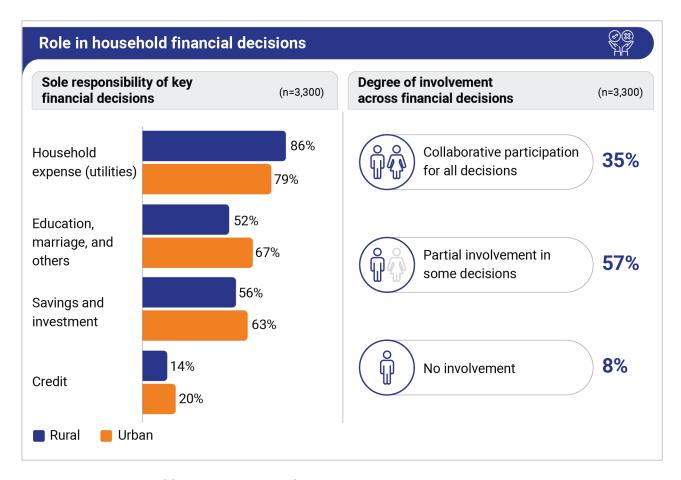


Figure 5: Assessment of financial readiness of women smartphone users

i. Women's role in household financial decisions reduces with the nature and ticket size of the transaction: Although most women respondents make decisions on household expenses for utilities and education, their role in household decisions reduces, especially in the case of savings and

credit products. (Figure 4) While social norms affect women's role in household decisions, the lack of awareness of DFS beyond digital payments, volatile personal income, and lack of assistance at banking touchpoints often limit women's scope to experiment with alternate financial products.



Lata is a 28-year-old teacher in Nagpur, Maharashtra. Her salary is deposited directly into her bank account. She uses it for utilities and occasionally makes digital payments to merchants. She transfers part of the income to her brother to invest in a SIP (systematic investment plan) on her behalf. Although she tried to seek advice from her bank branch, she could only gather information on traditional savings products, such as fixed and recurring deposits. Hence, she relies on her brother's advice for savings.

ii. Lack of incentive to digitise income among rural women who operate in a cash-led ecosystem: 68% of women in rural areas who receive personal or household income in cash stated they have limited motivation to change their habits as it would lead to additional time, travel costs, travel time, and wages foregone to visit a banking touchpoint and deposit the cash. Further, 54% stated cash is easy to account for, 46% stated merchants prefer cash payments or lack QR codes to accept payments, and 20% stated digital payments are difficult to use.

iii. Limited digital literacy among women DFS users increases the dependency on family members to conduct transactions on their behalf: As per this research, women with access to personal income are more likely to avail of financial services online. However, due to limited digital and financial literacy, DFS usage is often dependent and mediated through other

household members adept at using DFS. For instance, 36% of women with a personal income use digital payments. However, their husband, siblings, or other digitally savvy household members make payments on their behalf. As a result, they have limited opportunities and incentives to try other DFS products.



Shobha, a 32-year-old factory worker in Sitapur, Uttar Pradesh, receives her salary directly in her bank account and uses digital payments to transfer money to her family and friends. When asked which payment apps she uses, she stated that her husband uses Paytm through her phone when she needs to make payments. She lacks the confidence to make digital payments independently and has predominantly preferred cash payments.

# 2.2. Identifying factors that influence the decision to adopt DFS

Understanding the perception, behaviour, and norms that determine women users' adoption of DFS is essential to designing gender-intentional DFS products. Women consider various factors when they decide to adopt a financial service. They consider whether it is relevant to their financial

goals and income flow, whether it is safe to use, and whether the provider would protect their data. Their awareness of DFS, social influence, and cultural norms within the household and community determine their perception and knowledge of DFS. (Figure 6)

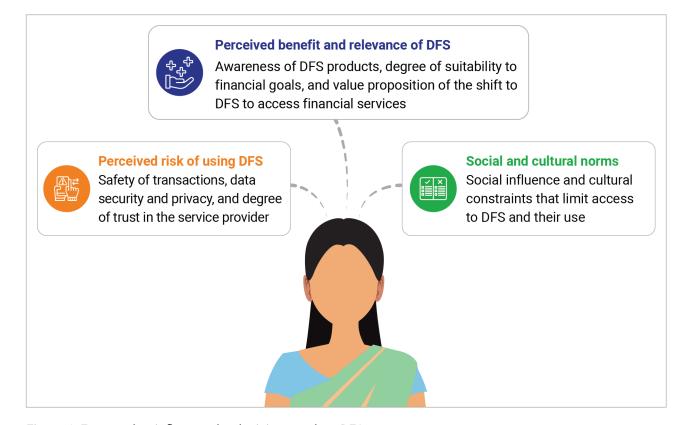


Figure 6: Factors that influence the decision to adopt DFS

# 2.2.1. The perceived benefit and relevance of DFS

Women's perceived relevance or usefulness of DFS depends on their awareness of DFS products, how well the product suits their financial needs and

goals, and the value it adds through convenience, economic benefits, and improved financial management. Based on the research, current gaps in financial services that DFS providers can address to increase adoption among women smartphone users have been mapped. (Figure 7)

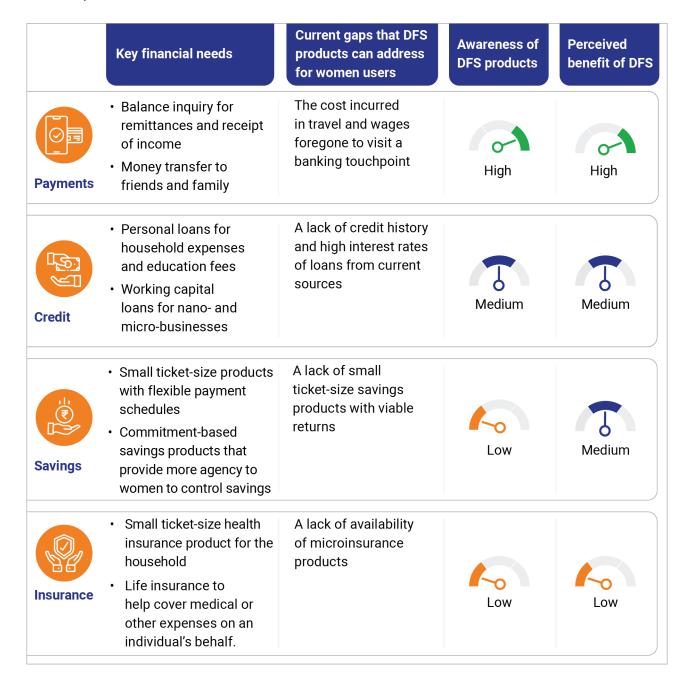


Figure 7: Current gaps in financial services and areas with potential for DFS adoption

- i. Women smartphone users who actively use digital payments perceive it as a critical tool that improves convenience, reduces transaction costs, and helps manage finances: 81% of women who actively use digital payments stated it enhances the convenience and ease of payments to merchants and peers, 77% said it saves time
- and effort, and 65% stated digital transactions help track finances easily. Furthermore, 58% of women said it reduced their visits to bank branches and ATMs for cash withdrawals.
- ii. Women with seasonal or volatile incomes seek digital savings products with flexible payment

schedules: 43% of women with a personal income are engaged in agriculture or freelance work that often has erratic payment schedules. Further, the level of savings among 32% of women with access to only household income varies based on monthly household expenses. (Figure 3) Women users need digital savings products that account for income volatility and have limited barriers to opt-in or opt-out each month.

iii. Rural women seek digital credit products that offer assistance in the application and onboarding

process, and are situated within existing social structures: This research shows that women in urban areas are more willing to experiment to avail of credit and savings online. In contrast, 65% of women in rural areas prefer credit products within existing social structures, such as microfinance institutions (MFIs), self-help groups (SHGs), and ROSCAs. Digitisation initiatives by MFIs and SHGs have encouraged some women to repay digitally. Rural women are inclined to avail themselves of digital credit products that account for their limited mobility and help with onboarding.



Neetu is a 36-year-old *Anganwadi* worker and MFI borrower from Nanjangud, Karnataka. She pays her weekly instalments digitally. This helps her save time on centre meetings and reduces the hassle of keeping cash ready for payments. Since the nearest bank branch and ATM are more than 2 km away from her house, she would incur additional weekly costs to withdraw cash. Since she has become adept at making digital payments, she helps some members pay digitally when they do not have enough cash. She also educates other women in her lending group to use digital payments.

#### 2.2.2. Perceived risk of using DFS

Women with limited resources, vulnerable social positions, and high levels of household responsibility may have a heightened aversion to risk. Therefore, they are wary of investments in new technologies. As a result, women adopt DFS only when they have been assured of the safety and security of transactions. Their key concerns include the lack of product recourse, a lack of trust in DFS providers, and concerns about fraud and scams.

- i. A lack of product recourse and limited opportunities for reversal of errors limit women users' willingness to experiment with DFS: This issue primarily arises due to the lack of understanding of transaction reversal policies and the lack of accessible grievance resolution mechanisms. As per the research, 34% of women who use mobile Internet exclusively stated that they fear making mistakes when they transact and are wary of transaction failures due to errors. This reduces the scope of experimentation with DFS and the adoption of suitable financial products.
- ii. A lack of trust in DFS providers: Most women stated they would prefer to use applications

provided by their current bank or a popular service provider used by others in their area. 20% of women stated they have witnessed others in their social circles experience fraud and scams, so they would prefer to use DFS providers vetted by someone they trust.

#### 2.2.3. Social and cultural norms:

The adoption of DFS among women is significantly influenced by social and cultural norms that shape their financial behaviours and choices. This includes the social influence of peers and trusted advocates when deciding to engage with DFS, and the social constraints that may hinder the scope of accessing and using these services independently.

• Social influence: Peers (including friends and family) and trusted advocates (such as BC agents, bank managers, and government school teachers) are the key influencers who nudge women to adopt DFS. 45% of women stated they would prefer to use DFS providers which their peers, neighbours, and family use and prefer. The choice of application and usage of DFS depends on the feedback from other DFS users in their households and social circles. Further, a trusted advocate from the bank,

government school teachers, and *Anganwadi* workers who educate women about the benefits of DFS adds a layer of trust. 24% of women stated that bank branch officials and BC agents had nudged and motivated them to use digital banking services.

 Social constraints: For some women in urban areas, the usage of smartphones for financial services is generally mediated through the male members of the household. Despite having Digital Payment Apps (DPAs) on their phones, these women do not use digital payments. The male household member uses the DPAs through the woman's phone. The key reasons women state for not using DPAs include income received in cash and a lack of confidence in using DPAs, among others.



Gayatri, a 35-year-old domestic worker in Guwahati, Assam, has a digital payment application and a mobile banking application on her smartphone. However, she does not use either, as her husband makes most household financial decisions and uses the payment application on her phone. She has tried to use DFS but lacks access to support and assistance within the household to learn how to use these applications.

# 2.3. Understanding the adoption patterns for DFS among women users

Once a woman smartphone user begins to access digital products and services, her adoption of DFS varies based on her digital and financial literacy and confidence in navigating the DFS application. Her continued usage of DFS depends on whether the DFS product is relevant and useful to her financial needs and goals. Hence, the adoption of DFS can be assessed based on the ease of use of the services and the primary use cases relevant to the user's financial needs.

Typically, a smartphone user's journey begins with non-financial services and progresses towards using DFS as their knowledge and comfort of using services improve over time. (Figure 8) This research revealed a high drop-off among women users, as they were restricted to using only non-financial services due to individual and ecosystem barriers. In this context, individual barriers include limited awareness of DFS beyond payment instruments and a lack of digital skills for self-onboarding. Meanwhile, ecosystem barriers include receiving income in cash and merchants' preference for cash payments.

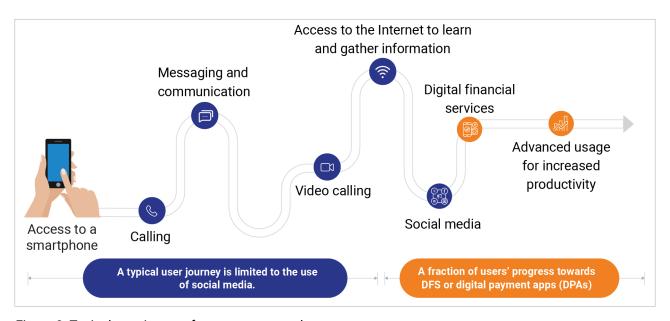


Figure 8: Typical user journey for women smartphone users



Rupsa is a 34-year-old *Anganwadi* worker who lives near Koraput in Odisha. Two years ago, Rupsa bought an Android smartphone for INR 11,000. She began her smartphone usage journey and limited herself to basic communication services, such as calling and texting through messenger apps, followed by video calls through WhatsApp. A few months later, she experimented with a few social media applications. After a year of continuous usage, she began to browse the internet and started uploading and sharing documents and media online. Soon enough, she became the go-to person for her neighbours and elderly family members to fill out forms, support in browsing the web, and even edit videos to post them later on Instagram Reels.

However, she stopped her journey here and is hesitant to experiment with e-commerce and DFS products, as she fears potential monetary losses due to fraud and scams. Even though she has independent access to a smartphone and uses it for non-financial services, Rupsa prefers that her husband make digital payments on her behalf.

# 2.3.1. DFS use cases adopted by women smartphone users

60% of women smartphone users avail of digital financial services through their devices and focus mainly on digital payment services, namely UPI and PPI wallet applications. In contrast, more than 85% of their male counterparts avail of DFS products and services. This gap persists for a few reasons, which mainly include higher active outward remittances conducted by men, including migrant labourers, and a higher degree of men's involvement in making household expenditures across various payment categories. On the other hand, the user uptake of other DFS products remains low, at around 15% for app-based credit and about 5% for savings and insurance apps. (Figure 9)

i. Digital payments are popular among women for limited use cases, such as balance inquiries and merchant payments: 60% of women smartphone users have access to digital payment applications and use them mainly to facilitate UPI payments. Popular applications include PhonePe, Google Pay, and Paytm, among other DPAs. Women use their smartphones for limited purposes, such as checking account balances for inward remittances and credit of salary. They also occasionally make merchant payments. Less than half of this user segment graduates to conducting digital payments across use cases.



Anjana, a 49-year-old widow in Sitapur, Uttar Pradesh, relies on her son Ranjan, a security guard in Delhi NCR, who sends her INR 7,000 monthly through PhonePe. This allows her to cover expenses conveniently without the need to wait for bank notifications or visit the nearby branch to update her passbook. She receives an instant notification from PhonePe the moment her account is credited. However, she still withdraws cash from her local ATM for purchases, even though local merchants accept UPI payments, due to a fear of overpaying and issues with internet connectivity.

ii. While the majority of women smartphone users acknowledge the convenience offered by app-based lending platforms, they prefer conventional lenders due to trust and a need to maintain relations: Credit is popular among women users, as 65% of them have availed of loans from both formal and informal sources, such as banks, MFIs, SHGs, and chit-fund groups.

However, less than 30% of such users have availed of credit online through digital lending apps and mobile banking applications. Most women borrow online for small ticket purchases of consumer durables, and the average ticket size of the loans ranges between INR 5,000 and INR 30,000.



Ramya, 23, who lives in Mysore, Karnataka, wanted to buy an iPhone two years ago after she started a new job. She needed credit as her savings were under INR 20,000. She opted for a buy now, pay later (BNPL) loan from a FinTech company recommended by her brother. However, when she needed money for house repairs, she borrowed INR 75,000 from a local MFI instead of a lending app. Despite higher interest rates, she prefers to borrow from the MFI since she does not know if low-ticket-size instalment options are available online.

iii. Whether they are working professionals or homemakers, women do save money across many forms, and savings bank accounts are the most popular: 92% of women smartphone users actively save a part of their personal or household income. However, 80% of them have passive savings in their bank account, followed by 34% in SHGs and ROSCAs, and only 10% save or invest in formal savings instruments. However, when it comes to direct investments through new-age apps in instruments, such as mutual funds and stocks, the number stands significantly low at around 4%.



Payal, a 36-year-old domestic worker from Nagpur, receives cash from all her employers on the first day of each month. After she budgets for household expenses, Payal deposits the remaining amount into her savings account through a local BC agent. She is also part of a state-level SHG that makes pickles, which earns her additional income. Even though the SHG offers a higher interest rate of 7% annually, she hesitates to invest due to the minimum lock-in period of three months, as she remains uncertain about her future liquidity needs.

iv. While conventional insurance penetration remains high, the uptake of app-based insurance policies remains significantly low: 67% of women user segments have purchased health and life insurance policies, which include PM-JAY, PMJJBY, and LIC. However, only about 3% of user segments have purchased insurance policies from app-based platforms. 60% of women insurance policyholders enrol through a bank branch or insurance agent, where they are offered assistance and guidance to secure a suitable policy.



Rupali, a 41-year-old IT support executive from Darang, Assam, enrolled in an INR 1 million (USD 11,982) life insurance policy with LIC a year ago. The policy guarantees a return of INR 8,00,000 (USD 9.586) upon maturity. Despite the presence of other digital platforms that offer similar policies with comparable returns for lower premiums, Rupali chose LIC due to her trust in her local agent. Her main motivation for the policy was not security but a financial investment with assured returns.

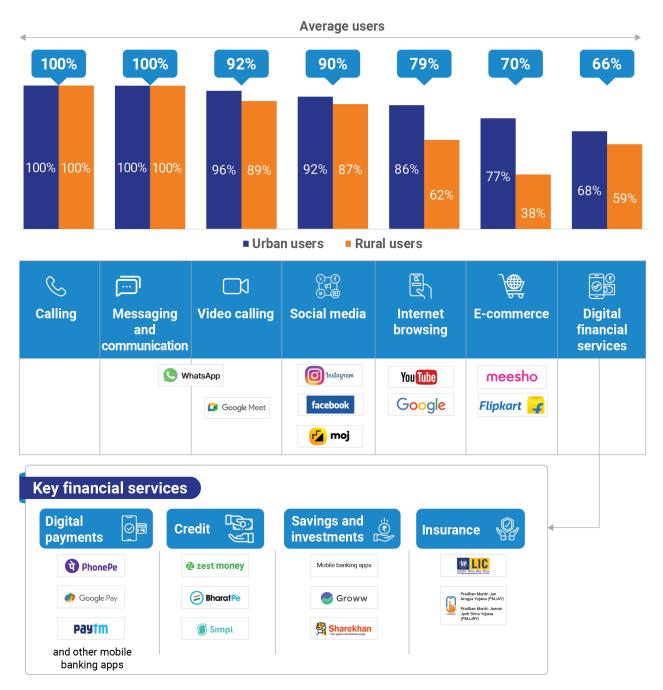


Figure 9: Share of users who availed of various smartphone-based services and their preferred DFS apps

# 2.3.2. Understanding the barriers faced by women smartphone users to access and use DFS

Despite the rise in innovative, easy-to-use, and inclusive DFS products, the penetration of such solutions remains significantly low due to functional and behavioural barriers. Functional barriers include the limitations in user interface of Fintech platforms and banking applications that impact its usage among women smartphone users with limited digital literacy. Behavioural barriers includes the internal and external motivations, preferences and goals that impact the usage of DFS among women smartphone users.

#### Functional barriers:

- Lack of assisted modes to onboard on Fintech platforms: Most DFS applications lack an inperson or live interaction model during new user onboarding, which creates a void for FinTechs' user onboarding journey. On the other hand, financial service providers with an offline presence can guide users throughout the onboarding process through their agents and staff. This instills a sense of comfort and trust, which users currently see missing in FinTech applications.
- Limited availability of audio assistance features to access and use DFS: Women smartphone users with limited digital literacy find audio content easier to understand than visual content. Moreover, it gives them a sense of one-sided human interaction and a guiding channel. While some mobile banking applications have deployed audio assistance features that enhance the overall user experience, FinTech platforms and banking applications lack this feature. This leads to the exclusion of women users, especially oral segments.

- Preference towards financial products with short lock-in period: Most low—and moderate-income women with volatile incomes anticipate a liquidity crunch in the future. As a result, they seek to invest in products that do not expose them to a lock-in period. While many DFS applications provide their users with investment products without lock-in terms, 65% of women users were unaware of them.
- Lack of digital skills to complete KYC process:
   Many FinTech platforms, such as DigiLocker,
   have integrated their KYC models into their
   platforms. This integration makes the KYC
   process seamless and convenient for literate
   user segments. However, it overwhelms the less literate user segments, as they prefer to provide
   documents manually and refrain from signing
   onto such platforms to avail of such services.
- Lack of relatable icons for easier navigation through fintech apps: 42% of women users stated they find icons useful to identify applications and specific services via their icons. Users select relevant services on their devices by navigating to a particular icon. While engaging with icons leaves a lasting impression on users help build upon the application's experience, some users stated the icons on some DFS applications lack adequate context for them. For instance, some women smartphone users were unable to understand the digital literacy or training videos section of DFS applications.
- Difficulty in finding relevant content within the DFS application: The vibrancy, design, and functionality of in-app elements play a significant role in attracting users and keeping them engaged. However, 36% of users stated they find it difficult to find the service relevant to them, especially on payment apps. It impacts their overall user experience due to lack of intuitive navigation and personalized content that can resonate with them.

#### **Behavioural barriers:**

- Preference towards physical banking touchpoints: 83% of women smartphone users, including users in rural areas, prefer the local bank branch or agent touchpoints to avail of various financial services, such as cash withdrawals, account transfers, and loan applications, due to their easy availability in their local vicinity. This reduces the incentive to seek financial services from remote or application-based platforms.
- Limited incentive to shift to digital lending platforms due to small ticket size of loans: Most credit and lending FinTech platforms require minimal KYC from their users and do not require in-person verification. They facilitate entirely collateral-free credit. Hence, the ticket size of such loans is lower than the loans offered by banks. This drives some users away from such platforms and towards conventional banks or other financial institutions.
- Perception of insurance as a mode of investment compared to cover against medical expenses:
   Life insurance is designed to help an individual or family address past liabilities or cover medical or other expenses on an individual's behalf. However, most of the LMI user segment perceives this as a mode of investment rather than as a way to cover liabilities and ensure the

- household's financial security. This is mostly a result of insurance policies being sold to them by agents, among others, in a similar fashion, where the returns of the life insurance policies are emphasised more than their medical or coverage benefits. Since app-based platforms do not emphasise the returns of the insurance product but the overall benefits, user segments do not seem to be interested in them and instead opt for policies sold by agents that are marketed as financial assets with appreciating returns.
- Indirect investment in instruments through family and social circle: About 16% of working women who invest in instruments, such as mutual funds and stocks, invest in such products indirectly. They transfer a part of their income to their male counterparts or other household members' bank accounts, who then invest in mutual funds and stocks on their behalf. While these women claim to have invested money in such instruments, they lack knowledge and control over the exact investments made on their behalf. This demonstrates the missing decision-making capabilities or circumstances for women within the user segments, including professional women.

# Recommendations for FIs to design gender-intentional DFS products





# 3.1 Key personas to address differentiated needs of women smartphone users

Based on the insights from the research, user segments were formulated to categorise women smartphone users based on their backgrounds, demographics, behaviour patterns, and attitudes. The personas were created to help stakeholders in

the DFS ecosystem design products and services based on the women users' individual and household financial needs. The women smartphone users have been segmented into pioneers, enthusiasts, and sceptics. (Figure 10)

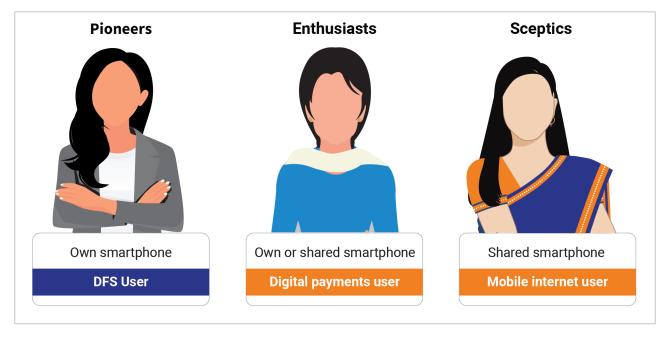


Figure 10: Personas of women smartphone users



**Pioneers:** Women smartphone users who actively use DFS are more likely to shift to digital modes for other financial services. However, the use cases for specific products may vary based on age, income level, and financial goals. For instance, the preference for a savings product may vary between two pioneers based on their age, risk-taking capacity,

and saving goals. A pioneer aged 26-35 years may prefer investing digitally in Systematic Investment Plans (SIP) and mutual funds. On the other hand, a pioneer aged 36-45 years may use digital payments regularly but may prefer visiting the bank branch to invest in fixed and recurring deposits. Figure 11 provides an overview of pioneers.

#### **Pioneers**



#### **Demographics**



Age 26 to 45 years



Location

Urban and semi-urban



**Education** 

Senior secondary to graduate



**Smartphone ownership** 

Personal device

#### **DFS readiness: Expert**



**Bank account** 

Own savings account



**Debit card** 

Active usage



Primary source of income

Personal income



**Household decisions** 

Partially involved in most financial decisions

#### **About pioneers**

- Pioneers are quick learners who actively use some DFS products.
- They have a higher propensity to experiment with online financial products.
- They perceive DFS as beneficial to save time and cost and find it convenient to use.
- Inertia to shift to online mode for savings and credit due to lack of awareness on suitable products and services

#### Financial habits and preferences: Advanced DFS users



Payments: Mostly digital

Pay merchants, friends, and family, and some bills online



Credit: Partially digital

Prefers digital lending for consumer durables and banks and MFIs for high-value credit



**Insurance:** Assisted mode

Prefers to pay insurance premiums through UPI to the agent

#### Savings: Partially digital

Invest in fixed and recurring deposits, SIPs, and mutual funds

#### Scope of DFS adoption: High

- Pioneers are inclined to experiment with digital savings and insurance with higher returns or cover and flexible payments.
- They seek credit products with low interest rates and easy repayment methods, such as auto debit from their bank account.

Figure 11: Women smartphone user segments: Pioneer

**Enthusiasts:** Women smartphone users who use digital payments for limited use cases often have limited knowledge of other DFS products which may be suitable to their needs. As a result, they rely on their social circle to identify and experiment with suitable products. However, the products they are willing to adopt may vary depending on whether they have a personal income, own a smartphone, and participate in household financial decisions. For instance, the borrowing preferences of enthusiasts may vary based

on whether they have a personal income or rely on household income. An enthusiast without a personal income may use the smartphone to make merchant payments, purchase products through e-commerce, and make gas bookings online. However, she would continue to save and borrow offline since she lacks a personal income source. On the other hand, an enthusiast with a personal income may try and experiment with digital lending products. Figure 12 provides an overview of enthusiasts:

#### **Enthusiasts**



#### **Demographics**



Age 26 to 35 years

**Education** 

Senior secondary



Location

Semi-urban and rural



Smartphone ownership

Personal or shared

#### DFS readiness: Proficient



**Bank account** 

Own savings account



**Debit card** 

Active usage



Primary source of income

Household income



**Household decisions** 

Partially involved in regular household expenses

#### **About enthusiasts**

- Enthusiasts are new smartphone users with limited digital literacy.
- They actively use social media and communication apps in regional languages or use the speech-to-text feature.
- · Their awareness of DFS is limited to digital payments.
- They perceive DFS as beneficial but difficult to access and use in English.

#### Financial habits and preferences: Intermediate DFS user



#### Payments: Partially digital

Makes small-ticket merchant payments online



#### Savings: Assisted mode

Prefers to save in post office savings, SHGs, and ROSCAs



#### Credit: Assisted mode

Borrows from MFIs and SHGs in the area



#### Insurance: Assisted mode

Pays insurance premiums in cash to the agent or at the bank branch

#### Scope of DFS adoption: Medium

- Enthusiasts would prefer to adopt DFS products recommended by their social circle, bank staff, or agent outlets.
- They need assistance during onboarding and guidance during initial use of the DFS application.

Figure 12: Women smartphone user segments: Enthusiast

**Sceptics:** Women smartphone users are less willing to adopt DFS as they lack an active debit card, receive income in cash, lack awareness of relevant

DFS products, and fear fraud and scams. Figure 13 provides an overview of sceptics:

# Sceptics

#### Demographics



Age 35 to 45 years



**Location** Rural



**Education**Secondary and below



Smartphone ownership Shared device and own feature phone

#### **DFS readiness:** Proficient



Bank account

Joint savings account



**Debit card** 

Inactive debit card



Primary source of income

Household income



**Household decisions** 

Partially involved in some financial decisions

#### **About sceptics**

- Sceptics are active users of social media and communication apps.
- They are averse to DFS due to a lack of awareness and fear of digital fraud and scams.
- They think DFS provides limited benefits within the cash ecosystem of rural and remote areas.

#### Financial habits and preferences:



Payments: Cash

Makes small-ticket merchant payments online



Savings: Assisted mode

Saves in cash and through SHG



Credit: Assisted mode

Borrows from MFIs and SHGs in the area



Insurance: Assisted mode

Pays life insurance premiums in cash to the agent

#### Scope of DFS adoption: Low

- Sceptics seek to borrow digitally at low interest rates for small-ticket purchases.
- They need training and assistance to understand the terms and conditions of DFS products.

Figure 13: Women smartphone user segments: Sceptics

# 3.2. Product and process transformations to drive DFS uptake among women

Gender-inclusive DFS products must account for the differentiated needs and preferences of women smartphone users who have varying digital and financial literacy levels. Fls should develop process flows and design DFS products that are engaging, intuitive, and accessible to ensure uptake and continued usage among women smartphone users. This research indicates that women smartphone users engage with non-financial services and adopt them much more easily than financial services. This section provides recommendations for each stage of a woman smartphone user's journey to help them progress to using DFS through a simple and intuitive user interface. The key process improvements are mapped across three stages: Discovery and onboarding, active use, and support for grievance redressal.

#### 3.2.1. Discovery and onboarding

New-to-internet users may struggle to navigate a new DFS application and feel intimidated, especially if the application is their first exposure to DFS. FIs can reduce friction at this stage by providing clear value propositions for the product and reducing ambiguities that may arise with excessive options. A well-designed discovery and onboarding journey can help establish trust and encourage women users to use the product regularly. (Figure 14)



#### Personalized user journey

Develop digital personas that reflect different levels of digital and financial readiness. Women users can pick the persona that aligns with them. This can help them learn about the DFS application and use it through a journey best suited to their current level of skills.



#### Phase-wise KYC

Provide partial access to the product before KYC so that women can see its value proposition before they sign up for it. Further, break the KYC process into phases based on the features that users want to access.



## Provide alternate input channels for onboarding

Provide alternate options to provide details in addition to text input. This can include the use of speech recognition for inputs and pre-filled inputs by scanning the relevant document.

Figure 14: Process transformations at the stage of discovery and onboarding

#### 3.2.2. Active use of DFS

Once a woman smartphone user downloads and onboards a DFS application or product, she seeks relevant, minimal options to reduce the time needed to explore various application features. Fls should provide relevant product options based on

the persona selected at the onboarding stage and the demographics captured during the initial KYC. Fls can use audio guides for navigation and peer learning to ensure continued and active use of DFS. (Figure 15)



### Identify users' financial needs and minimise product options

Women users, especially those with shared smartphones, have limited time to explore a new application. FIs should provide two or three relevant DFS products in line with their persona to speed up the decision-making process for using a given product.



### Audio guides in vernacular language to ease navigation

In addition to text guides, audio guides in regional languages preferred by the user can help make it easier to onboard and use the DFS application. This includes audio output while the user types in details and enters the transaction amount, among others.



### Use peer learning and community support

FIs can develop peer-learning groups on the app to help women learn from other users with similar levels of digital and financial readiness. This can also help build trust for the FIs.

Figure 15: Process transformations to encourage active use of DFS

# 3.2.3. Support for grievance redressal

Women smartphone users across segments seek support that provides clear guidance for common issues and prompt responses to inquiries. They seek access to grievance redressal mechanisms through various channels, such as chat or phone calls with dedicated service representatives.



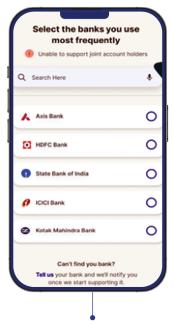
#### **Build a recourse for errors**

When a user reaches an error state in the DFS application, provide the top four possibilities for the errors and allow the user to try the given stage again. For instance, if the user enters the wrong pin code, provide alternate options based on the device's geolocation.



#### Provide accessible and multiple channels for support

Fls should add the grievance resolution option prominently on the home page, and in cases where the user reaches an error state. Provide the user the option to chat in regional languages, get support from a customer service executive, or use peer-learning groups for minor errors.



#### State the exclusion criteria clearly

This is especially relevant when the user onboards to a new product. Prioritize the products for which the user is likely to be eligible. This is especially useful for digital lending platforms that can use personas and demographics to provide key products for which the customer is eligible.

Figure 16: Process transformations to improve support and grievance redressal

#### **Conclusion**

The rise of smartphone adoption among women in India presents a significant opportunity to drive financial inclusion and empower women through digital financial services (DFS). However, there remains a substantial gap between women's access to smartphones and their adoption of DFS.

While 66% of women smartphone users avail of DFS (primarily digital payments), more than 85% of their male counterparts use DFS products and services. This gap persists due to factors such as limited digital and financial literacy, lack of personal income, and societal constraints.

Process transformations across the user journey to drive DFS uptake among women can aid in bridging this gap in the coming years. These include providing clear value propositions, reducing ambiguities, offering relevant product options based on user personas, and ensuring prompt support through various channels. By implementing these changes, financial service providers can create a more engaging, intuitive, and accessible experience for women smartphone users.

The insights from this report serve as a call to action for ecosystem stakeholders to collaborate and create an enabling environment for women's adoption of DFS in India. By understanding the financial preferences, needs, and goals of women smartphone users, we can design gender-intentional products and processes that promote financial inclusion and empower women to take control of their financial lives.

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#### **Annexure**

		Mobile phone ownership			Affordability		Bank account ownership and access	
		Own smartphone	Shared smartphone	Feature phone	Finds martphones to be expensive	Find data tariffs to be expensive	Bank account linked to mobile number	Have a physical banking touchpoint within 1km
	Total (n=3300)	72%	20%	8%	59%	20%	99%	90%
Location	Rural	56%	35%	9%	64%	24%	99%	92%
	Urban	85%	10%	5%	57%	18%	100%	96%
O	18-25 years	81%	13%	5%	53%	22%	100%	94%
	25-40 years	72%	22%	6%	58%	19%	99%	91%
Age	41-60 years	62%	26%	12%	64%	18%	98%	95%
	>60 years	50%	0%	50%	100%	100%	100%	90%
	Upto Class 5	41%	32%	27%	55%	34%	98%	95%
ucation	Upto Class 10	62%	26%	11%	55%	34%	98%	95%
	Upto Class 12	72%	24%	4%	62%	17%	100%	90%
Edu	Graduation	89%	9%	2%	59%	21%	99%	90%
	Post grad	99%	1%	0%	59%	21%	99%	90%
	Homemakers	27%	61%	12%	52.73%	12.73%	98%	87%
	Salaried (white collar)	99%	1%	NIL	54.69%	28.91%	100%	100%
Occupation	Salaried (blue collar)	76%	18%	6%	58.21%	23.73%	100%	100%
	Business owner	85%	10%	5%	62.20%	7.66%	100%	100%
	Agriculture	38%	38%	24%	75.60%	12.03%	100%	100%
	Unemployed	83%	7%	10%	66.67%	8.00%	100%	100%

		Use for making/ receiving calls	Use messaging and communication apps	Use for making/ receiving video calls / online meetings	Use social media platforms	Use for e-commerce	Use for making digital payments	Use for accessing govt. apps like UMANG
	Total (n=3300)	100%	100%	92%	90%	70%	66%	4%
Location	Rural	100%	100%	96%	92%	77%	65%	7%
	Urban	100%	100%	89%	87%	38%	59%	2%
Age	18-25 years	100%	100%	100%	97%	94%	89%	4%
	25-40 years	100%	100%	97%	93%	77%	72%	4%
	41-60 years	100%	97%	92%	88%	42%	53%	3%
	>60 years	100%	92%	89%	100%	54%	55%	0%
Education	Upto Class 5	100%	96%	91%	87%	47%	57%	2%
	Upto Class 10	100%	96%	91%	87%	47%	57%	2%
	Upto Class 12	100%	94%	98%	98%	42%	72%	1%
	Graduation	100%	100%	100%	100%	91%	84%	6%
	Post grad	100%	100%	100%	100%	91%	84%	6%

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MSC (MicroSave Consulting) is a boutique consulting firm that has, for 25+ years, pushed the world toward meaningful financial, social, and economic inclusion. With nine offices around the globe, more than 200 staff of different nationalities, and varied expertise, we are proud to be working in more than 68 developing countries. We partner with participants in financial services ecosystems to achieve sustainable performance improvements and unlock enduring value.

Our clients include governments, donors, private sector corporations, and local businesses. We can help you seize the digital opportunity, address the mass market, and future-proof your operations.



#### **Registered Office**

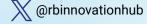
Reserve Bank Innovation Hub, Keonics, 27th Main Road, 1st Sector, HSR Layout, Bengaluru, Karnataka - 560102

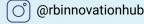
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