

Digital Financial Inclusion Among Women Entrepreneurs: Challenges and Opportunities in Southern Rajasthan

Poonam Saini¹, Dr. Mukesh Mathur², Arjun Khateek³

¹Research Scholar, Banking and Business Economics Department, UCCMS, MLSU, Udaipur

²Former Professor, Banking and Business Economics Department, UCCMS, MLSU, Udaipur

³Research Scholar, Accountancy and Business Statistics Department, UCCMS, MLSU, Udaipur

ABSTRACT:

This study explores the current landscape of digital financial inclusion among women entrepreneurs in Southern Rajasthan, focusing on the practical challenges they face and the opportunities digital platforms offer. The expansion of digital financial services has created more opportunities for women-led businesses, particularly in rural and semi-urban regions. However, the shift from traditional to digital systems comes with its own set of challenges. Based on primary data collected through structured Likert-scale responses, the study reveals that women entrepreneurs often face hurdles such as low digital literacy, limited access to smartphones or other devices, unreliable internet connections, and concerns about transaction security. Despite these obstacles, many respondents acknowledge the advantages of mobile banking, including quicker transactions, improved market access, and greater financial independence through digital platforms. The study highlights the influence of sociocultural and infrastructure factors on digital inclusion and explores whether perceptions differ by location. While the government is asked to enhance infrastructure, simplify digital tools, and promote inclusive legislation, recommendations are made for female entrepreneurs to build digital confidence gradually. The outcome emphasises the need for a supportive environment that encourages women to embrace and sustain digital financial practices, making inclusion not only possible but also compelling.

Keywords: Financial Inclusion, Women Entrepreneurs, Challenges And Opportunities

INTRODUCTION:

New opportunities for financial inclusion have been made possible in recent years by the development of digital technology, especially in developing countries like India. More engagement in the formal economy is now possible due to the improved accessibility of financial services provided by digital platforms and mobile applications for people living in remote and underserved areas. The transformation of traditional banking into technology-driven platforms has enabled wider financial participation, especially in areas and among groups historically excluded from formal banking systems. One such group that stands to gain significantly from this digital shift is women entrepreneurs. These women, often balancing multiple social and economic roles, find in digital finance not just a tool for business management but also a gateway to empowerment and independence.

India's growing digital infrastructure ranging from Aadhaar-based identification to mobile banking, Unified Payments Interface (UPI), and digital wallets has simplified access to financial services. It has made processes faster, more transparent, and less dependent on physical infrastructure. However, while the national picture may show progress, regional disparities still exist, especially in states like Rajasthan. Southern Rajasthan, in particular, represents a region with a unique socio-cultural fabric where economic participation by women is growing but remains uneven. Here, women entrepreneurs are emerging as strong economic contributors, yet they often face structural, educational, and technological challenges that hinder full access to the digital financial ecosystem.

Women-led businesses, whether in agriculture, handicrafts, retail, or services, are often rooted in the informal sector. Many of these ventures start small and are sustained through personal savings, local borrowings, or self-help groups. These women's access to digital payments, insurance, credit, and other financial services might significantly alter their financial security and entrepreneurial trajectory. But there are drawbacks to digital financial inclusion. Sometimes the potential of digital technologies and their actual implementation are hampered by problems including digital illiteracy, a lack of trust in digital platforms, limited access to mobile devices or internet connectivity, and deeply ingrained societal norms. Furthermore, despite the availability of digital infrastructure, utilisation trends show caution and underutilisation. This cautious approach could result from a lack of institutional support, fear of fraud, or a vague understanding of transaction procedures. For female entrepreneurs juggling company and home obligations, time and assistance are vital resources. Without organised instruction or social support systems, digital tools could be terrifying instead of empowering. One aspect of the digital divide is access to devices; another is the literacy and self-assurance needed to properly use them. Therefore, to close this gap, both societal initiatives and technology advancements are needed.

Despite these obstacles, there is still a great deal of room for progress. More and more women are using digital platforms to handle inventory, reach online marketplaces, grow their clientele, and accept payments. More digital inclusion for underserved populations is being promoted by government-led programs and partnerships with the corporate sector. Through initiatives like Jan Dhan accounts, BHIM app marketing, and rural banking outreach, a foundation for financial activity is being established. However, these activities need to be more gender-sensitive and region-specific, particularly in areas like Southern Rajasthan that are deeply rooted in culture.

Cultural dynamics in this region influence how women view their roles in both business and technology. While urban centers may see higher smartphone penetration and usage, many rural areas still witness male-dominated decision-making when it comes to money matters. Women may not have independent bank accounts, or if they do, they might lack the autonomy to operate them. Additionally, language barriers and limited exposure to digital interfaces restrict confident use. This creates a situation where women entrepreneurs may be digitally registered but not meaningfully included in the financial system.

Southern Rajasthan is home to a range of grassroots enterprises, from small-scale textile units and food processing businesses to local retail outlets and service ventures. By providing these programs with technology, education, localised assistance, and ongoing engagement, digital financial inclusion could be accomplished. With the correct information and resources, female entrepreneurs not only expand their businesses but also serve as community role models, encouraging others to pursue similar careers..

Therefore, granting women access to a bank account or a payment app is only one aspect of digital financial inclusion. It entails fostering an atmosphere that uplifts women, boosts their self-esteem, recognises their difficulties, and actively supports them. It is important to carefully cultivate this kind of

supporting environment in Southern Rajasthan, where traditional gender roles frequently clash with contemporary economic goals. Empowering female entrepreneurs and assisting them in thriving in the expanding digital economy is one of the main opportunities.

REVIEW OF LITERATURE

Challenges for Digital Financial Inclusion

Digital financial inclusion among women entrepreneurs in Southern Rajasthan faces several challenges, as highlighted by various studies. These obstacles to women's access to digital financial services are complex and involve financial, educational, and infrastructure constraints. In order to empower female entrepreneurs and promote regional economic development, these issues must be addressed. The following sections look at the particular issues and possible fixes for improving women's access to digital currency in Southern Rajasthan.

Socio-Economic Barriers

Economic Disparities: Women in Southern Rajasthan often encounter significant economic disparities compared to their male colleagues, limiting their access to financial resources. The elevated rejection rate for bank loans exacerbates the issue, compelling numerous women to resort to informal financing sources with higher interest rates, so deteriorating their financial circumstances. (Nain et al., 2024).

Workforce Participation: The workforce participation rate for women in regions like Haryana, which shares similar socio-economic characteristics with Southern Rajasthan, is below the national average. This low participation rate limits women's financial independence and access to formal financial services (Chauhan & Sharma, 2024).

Educational and Digital Literacy Challenges

Financial Literacy: Enhancing digital financial literacy is crucial for improving women's financial inclusion. Studies show that digital financial literacy has a more pronounced impact on women, suggesting that targeted literacy programs could significantly benefit women's financial empowerment (Widyastuti et al., 2024).

Infrastructure and Technological Barriers

Access to Digital Infrastructure: One major barrier for women entrepreneurs in the informal economy is limited access to digital infrastructure. Encouraging women to use digital financial services requires facilitating their access to reliable internet and digital devices. (Sowmya & Pai, 2024).

Cultural and Social Barriers

Social and Cultural Acceptance: Women may find it challenging to use digital financial services due to cultural norms and social expectations. To eliminate these barriers, focused initiatives that promote societal acceptance and assistance for female entrepreneurs are required. (Sowmya & Pai, 2024).

Policy and Institutional Barriers

Regulatory Challenges: Policymakers need to address regulatory challenges that limit women's access to financial services. This includes simplifying KYC processes and ensuring data privacy and security to build trust in digital financial systems (Buteau et al., 2021).

Government and Policy Support: Effective government policies and support systems are crucial for fostering digital financial inclusion. This includes initiatives to improve digital literacy, provide financial support, and promote gender-inclusive financial services (Sowmya & Pai, 2024).

For women entrepreneurs in Southern Rajasthan, there are numerous barriers to digital financial inclusion, but there are also opportunities for advancement. By addressing socioeconomic, educational,

infrastructure, and cultural barriers, policymakers and financial institutions can increase women's access to digital financial services. As a result, this can promote gender equality, empower female business owners, and boost local economies. However, it is important to recognise that these problems are common outside of Southern Rajasthan and to advocate for a comprehensive and inclusive approach to digital financial inclusion.

Opportunities for Digital Financial Inclusion

Digital financial inclusion presents significant opportunities for women entrepreneurs in Southern Rajasthan, a region characterized by socio-economic challenges and limited access to traditional financial services. By giving them the tools to manage their finances, obtain credit, and engage more fully in the economy, the integration of digital financial services may empower women. This requires removing a number of barriers, such as those related to computer literacy, infrastructure, and social standards. These possibilities and difficulties are examined in more detail in the sections that follow.

Empowerment through Digital Entrepreneurship: Women can reach a larger audience and become financially independent by overcoming traditional obstacles like restricted market access and sociocultural constraints thanks to digital platforms. (Verma, 2024).

Government Initiatives: More women now have bank accounts thanks to initiatives like the Pradhan Mantri Jan Dhan Yojana (PMJDY), especially in rural regions, laying the groundwork for future digital financial inclusion. (Jena, 2024).

Digital financial inclusion has great promise for women-led businesses in Southern Rajasthan, but achieving its full potential necessitates resolving a few major challenges first. This means enhancing digital literacy, strengthening technical infrastructure, and dismantling societal barriers. Digital financial tools could thus play a major role in the economic empowerment of women as well as the inclusive growth and development of the region.

RESEARCH GAP:

In India, urban consumers study digital financial inclusion more than women-owned businesses, particularly in Southern Rajasthan. Articles frequently ignore the difficulties faced by women running small enterprises, even as they emphasise the advantages of the internet. The impact of local infrastructure, cultural norms, and life experiences on female entrepreneurs is frequently overlooked in favour of secondary data. Targeted solutions are hampered by this lack of data. This study aims to address these gaps by collecting primary data, analyzing specific challenges and opportunities, and offering region-specific insights into the evolving relationship between women entrepreneurs and digital finance.

RESEARCH METHODOLOGY:

Research Design:

This study adopts a descriptive and exploratory research design to understand the current status, challenges, and perceived benefits of digital financial inclusion among women entrepreneurs in Southern Rajasthan. The focus is on collecting first-hand responses to analyze their experiences and views on digital financial tools and services.

Research Objective:

The core objective of the study was to assess the perception of women entrepreneurs in Southern Rajasthan regarding the challenges and opportunities in adopting digital financial services.

Sampling Method:

A purposive sampling method is used to ensure that only active women entrepreneurs who are managing or running business operations are included in the study. Efforts are made to ensure a fair representation from both urban and rural areas of Southern Rajasthan.

Sample Size:

A sample of 200 women entrepreneurs is targeted from four key districts of Southern Rajasthan: Udaipur, Banswara, Chittorgarh, and Dungarpur.

Data Collection Method:

Primary data is collected through a structured questionnaire consisting of three sections: demographic profile, Likert-scale items on challenges, and Likert-scale items on opportunities related to digital financial inclusion. Respondents are approached personally or through field investigators using both offline and online survey modes, depending on accessibility and digital literacy.

Research Instrument:

The questionnaire contains 20 Likert-scale statements, 10 on challenges and 10 on opportunities, rated on a 5-point scale (Strongly Disagree to Agree Strongly). The tool was pre-tested with a small sample to ensure clarity, language appropriateness, and reliability.

Ethical Considerations:

Confidentiality and anonymity of all respondents have been strictly maintained. Participation was voluntary, and respondents were informed about the purpose of the study beforehand.

LIKERT STATEMENT

A set of 20 Likert statements were drafted, 10 each on Challenges and Opportunities, to be presented to respondents on a five-point Likert set, ranging between strongly disagree to strongly agree:

Challenges in Digital Financial Inclusion

1. I find it difficult to use digital financial platforms due to a lack of technical knowledge.
2. Poor internet connectivity in my area limits my ability to access digital banking services.
3. I am concerned about the safety and security of online financial transactions.
4. I prefer cash transactions because I do not trust digital payment systems.
5. The language used in financial apps and portals is not easy for me to understand.
6. I do not receive adequate support or guidance when I face problems with digital financial tools.
7. Social norms and family restrictions make it difficult for me to independently use digital financial services.
8. I find it hard to keep up with the frequent changes in digital finance technologies.
9. I do not have regular access to a smartphone or digital device for financial purposes.
10. High transaction charges discourage me from using digital financial platforms.

Opportunities in Digital Financial Inclusion

1. Digital finance has made it easier for me to receive payments from customers.
2. I can now manage my business finances more effectively using mobile banking.
3. Access to digital loans and credit has helped me grow my business.
4. Digital payments have reduced my dependency on middlemen or cash agents.
5. I have been able to reach more customers through online platforms and digital tools.
6. Government schemes and training programs have helped me understand digital financial services.
7. Using digital wallets and UPI has made my business transactions faster and more transparent.

8. I feel more independent in handling financial decisions because of digital access.
9. Digital finance has reduced the need for physical visits to banks, saving me time.
10. I believe digital finance can help women entrepreneurs become more financially empowered.

RELIABILITY

Table 1.1: Reliability

| Likert Statement | Cronbach's Alpha | No of items |
|------------------|------------------|-------------|
| Challenges | 0.861 | 10 |
| Opportunities | 0.788 | 10 |

As depicted in the above table, the Cronbach's Alpha for the set of statements was more than 0.70, which states that data collected through the Likert statements is consistent and dependable for further analysis.

HYPOTHESES:

One hypothesis was framed to be statistically investigated:

H₀₁: There is no significant difference in the perception of challenges related to digital financial inclusion among women entrepreneurs based on their location.

For the purpose of testing the hypothesis mentioned above, the primary data collected from the respondents

Descriptive Statistics

Table 1.2: Descriptive Statistics

| | n | Mean | Std. Deviation |
|-------------|----|------|----------------|
| Udaipur | 51 | 2.86 | 1.34 |
| Chittorgarh | 56 | 3.96 | 1.01 |
| Dungarpur | 45 | 4.15 | 0.75 |
| Banswara | 48 | 3.73 | 1.01 |

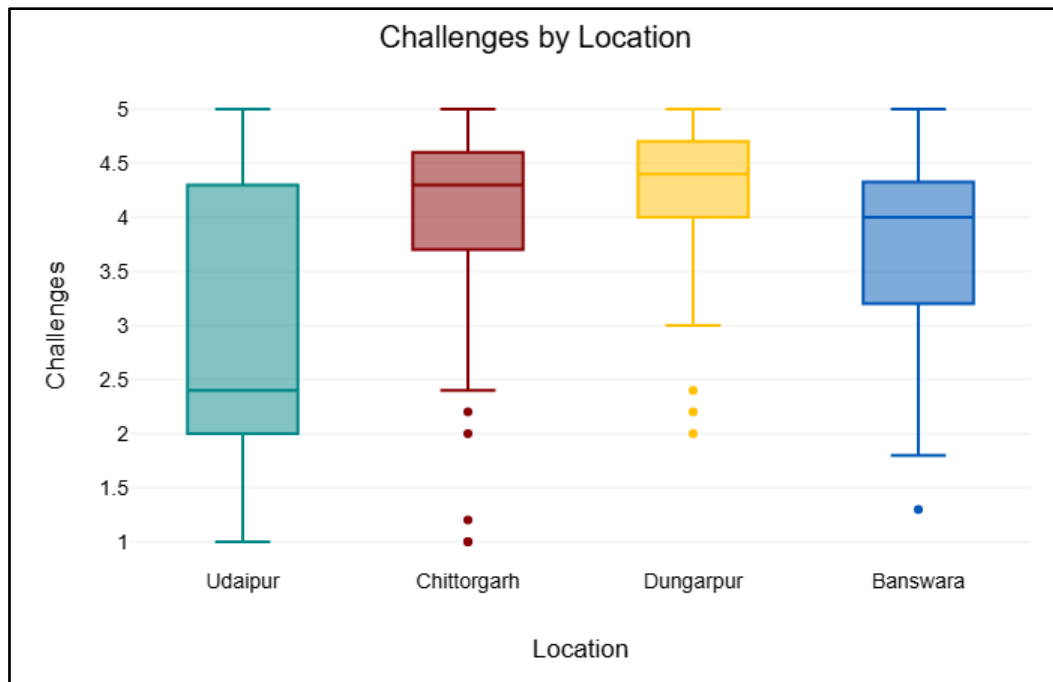


Figure 1.1: Challenges and Location

The above table and figure depict the Challenges' mean score location-wise which states that the average for the Udaipur group is 2.86, the average for the Chittorgarh group is 3.96, the average for the Dungarpur group is 4.15, and the average for the Banswara group is 3.73.

ANOVA

Table 1.3: ANOVA

| | Sum of Squares | df | Mean Square | F | p |
|----------|----------------|-----|-------------|------|-------|
| Location | 48.27 | 3 | 16.09 | 14.5 | 0.001 |
| Residual | 217.53 | 196 | 1.11 | | |
| Total | 265.8 | 199 | | | |

The above table depicts the results of ANOVA, $F = 14.5$, $p = 0.001$. Since the p-value was found to be less than 0.05, the null hypothesis is rejected, and concluded that there is a significant difference in the perception of challenges related to digital financial inclusion among women entrepreneurs based on their location.

H₀₂: There is no significant difference in the perception of opportunities related to digital financial inclusion among women entrepreneurs based on their location.

For the purpose of testing the hypothesis mentioned above, the primary data collected from the respondents

Descriptive Statistics

Table 1.4: Descriptive Statistics

| | n | Mean | Std. Deviation |
|-------------|-----|------|----------------|
| Udaipur | 51 | 3.2 | 1.32 |
| Chittorgarh | 56 | 4.45 | 0.99 |
| Dungarpur | 45 | 4.63 | 0.7 |
| Banswara | 48 | 3.9 | 1.03 |
| Total | 200 | 4.04 | 1.17 |

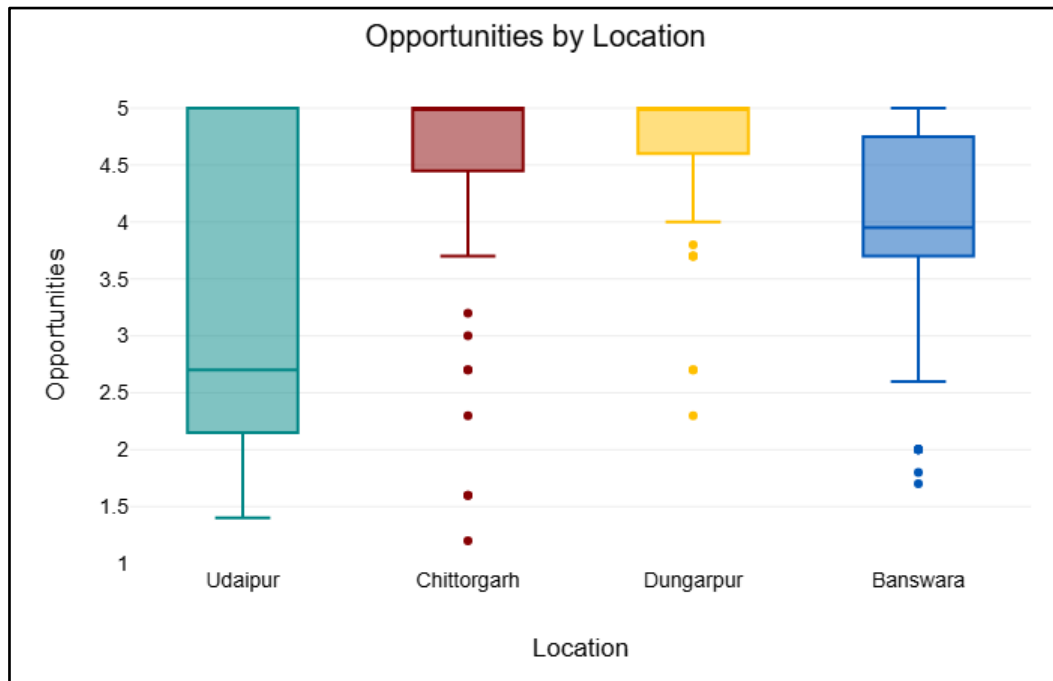


Figure 1.2: Opportunities and Location

The above table and figure depict the Opportunities mean score location-wise which states that the average for the Udaipur group is 3.20, the average for the Chittorgarh group is 4.45, the average for the Dungarpur group is 4.63, and the average for the Banswara group is 3.90.

ANOVA

Table 1.5: ANOVA

| | Sum of Squares | df | Mean Square | F | p |
|----------|----------------|-----|-------------|-------|-------|
| Location | 61.72 | 3 | 20.57 | 19.03 | 0.001 |
| Residual | 211.92 | 196 | 1.08 | | |
| Total | 273.64 | 199 | | | |

The above table depicts the results of ANOVA, $F = 19.03$, $p = 0.001$. Since the p-value was found to be less than 0.05, the null hypothesis is rejected, and concluded that there is a significant difference in the perception of opportunities related to digital financial inclusion among women entrepreneurs based on their location.

FINDINGS:

Following were the key findings from the research work

1. Many women entrepreneurs expressed that a lack of technical knowledge and difficulty understanding app interfaces restrict their ability to use digital financial tools effectively. Poor internet connectivity and irregular access to smartphones were also reported as significant barriers, especially in rural areas.
2. Concerns about digital security and fear of financial fraud emerged as common issues, leading several respondents to prefer cash transactions over online methods. Some women also shared that limited guidance and absence of timely support during technical issues discourage them from adopting digital platforms confidently.
3. Despite these challenges, many respondents acknowledged that digital payments have made financial transactions faster and more convenient. Women found mobile banking useful for tracking income and managing business-related expenses efficiently.
4. A considerable number of entrepreneurs shared that digital tools have expanded their reach to more customers and reduced their reliance on intermediaries. Additionally, those who participated in training sessions or self-help group meetings found themselves more confident in using digital financial services.
5. Overall, the responses reflect a positive outlook toward digital finance, but practical limitations, trust issues, and social factors still create hesitation in fully embracing digital platforms.

CONCLUSION:

The findings highlight a mixed landscape of digital financial inclusion for women entrepreneurs in Southern Rajasthan. On one hand, digital platforms are clearly becoming more accessible and beneficial—helping women receive payments, manage accounts, and reach customers with greater ease. On the other hand, challenges such as digital illiteracy, poor internet, lack of trust, and social constraints continue to hold back widespread adoption. While many women see the value and opportunity in digital finance, their full participation is hindered by practical and cultural barriers. Addressing these challenges through localized training, improved infrastructure, and community-level support can help unlock the true potential of digital financial inclusion for women-led businesses in this region.

SUGGESTIONS:

On the basis of work done in the paper, following suggestions have been drafted, each for women and that for the Government to improve the current state of knowledge:

Suggestions for Women Entrepreneurs:

1. Participate in Local Digital Literacy Programs: Women entrepreneurs should actively engage in digital training camps or workshops conducted by banks, NGOs, or self-help groups to better understand financial apps, UPI, mobile banking, and online safety.
2. Form or Join Peer Support Groups: Creating local peer groups with other women in business can help in knowledge-sharing, confidence-building, and mutual assistance in navigating digital tools.

3. Start with Basic Digital Tools: Rather than adopting complex platforms, women can begin with simple apps like UPI or digital wallets and gradually move to mobile banking, accounting tools, or online sales platforms.
4. Involve Family Members in Digital Transition: Including family members in the learning process may help in gaining support and reducing social resistance, especially in conservative households.
5. Use SHGs or Cooperatives as a Digital Entry Point: Women already part of SHGs or cooperatives can leverage these networks to adopt group-based digital solutions and collectively deal with challenges.

Suggestions for the Government:

1. Conduct Targeted Digital Literacy Drives in Local Languages: Organize recurring, region-specific training programs in vernacular languages with a focus on rural women entrepreneurs, ensuring they are simple and easy to understand.
2. Improve Digital Infrastructure in Remote Areas: Invest in strengthening internet connectivity and digital access in underserved regions to make digital services more reliable and inclusive.
3. Develop Gender-Sensitive Financial Apps and Interfaces: Encourage fintech companies to create user-friendly interfaces with audio-visual guides and content tailored to the needs of first-time women users.
4. Introduce Incentives for Digital Transactions: Provide small rewards or cashbacks to women entrepreneurs for using digital modes of payment, thereby promoting regular usage and reducing hesitation.
5. Collaborate with SHGs and NGOs for Wider Outreach: Work closely with grassroots organizations to identify and support women-led enterprises, using these local bodies to bridge the last-mile digital inclusion gap.

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