A Study on the Challenges and Threats faced by Below Poverty Line Groups in Digital Financial Inclusion in Madhya Pradesh

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Abstract

Digital financial inclusion is increasingly being recognized as a cornerstone of equitable economic growth and poverty alleviation in India. The rapid spread of digital technologies and government-backed financial inclusion initiatives have created unprecedented opportunities for marginalized populations, including those living below the poverty line (BPL). Yet, despite these advances, the path to true digital financial inclusion in states such as Madhya Pradesh remains beset by formidable challenges and threats. This research paper provides a comprehensive analysis of the barriers faced by BPL groups in Madhya Pradesh, drawing on academic literature, policy reports, and empirical studies. Key issues examined include infrastructural deficits, low digital literacy, socio-cultural exclusion, affordability, cybersecurity vulnerabilities, and systemic policy gaps. The paper also explores the role of gender, caste, and rurality in shaping access to digital financial services and provides detailed policy recommendations for making digital financial inclusion more inclusive and effective for the most vulnerable.

Keywords:

Introduction

The digital revolution has transformed access to financial services across the globe. In India, the government's push for digitalization—exemplified by initiatives such as Digital India, Jan Dhan Yojana, Aadhaar, and Unified Payments Interface (UPI)—has been lauded as a leap toward financial inclusion and empowerment for all citizens. Digital financial inclusion refers to ensuring that individuals and businesses, particularly those who are underserved or excluded, have access to useful and affordable financial products and services delivered responsibly through digital channels (RBI, 2021).

However, digital financial inclusion is not merely about technology deployment. It encompasses a complex interplay of infrastructure, literacy, trust, socio-cultural context, and institutional capacity. Nowhere is this interplay more apparent than among BPL households in Madhya Pradesh, a state marked by significant rurality, persistent poverty, and deep social stratification. As of 2021, Madhya Pradesh had an estimated 29% of its population living below the poverty line, with higher rates in tribal and rural areas (NITI Aayog, 2021). While over 60 million Jan Dhan accounts have been opened in the state, the actual use of digital financial services by BPL groups remains stubbornly low (Ministry of Finance, 2023).

This paper aims to answer three critical research questions:

1.   What are the main challenges faced by BPL populations in Madhya Pradesh regarding access to digital financial services?

2.   What specific threats undermine the effectiveness and safety of digital financial inclusion for these groups?

3.   How can policy and practice be reoriented to address these challenges and threats?

LITERATURE REVIEW

Below Poverty Line (BPL) groups in Madhya Pradesh face significant challenges and threats in achieving digital financial inclusion. These challenges are multifaceted, involving socio-economic, infrastructural, and systemic barriers. Despite initiatives like the Jan Dhan Yojana aimed at increasing financial access, several obstacles persist that hinder the effective inclusion of BPL groups in the digital financial ecosystem. The following sections detail these challenges and threats.

Socio-Economic Barriers

A significant barrier is the limited financial literacy among BPL groups, which impedes their ability to effectively utilize digital financial services(Rather & Lone, 2012).Many BPL individuals lack the necessary income and assets to engage with formal financial systems, which often require collateral for loans(Rather & Lone, 2012).

Infrastructural Challenges

The digital infrastructure in rural areas of Madhya Pradesh is underdeveloped, limiting access to digital financial services. This digital divide exacerbates financial exclusion. This paper highlights that below poverty line groups in developing countries, including Madhya Pradesh, face challenges in digital financial inclusion due to the digital divide, which exacerbates financial exclusion. Mpofu, 2024).The requirement for extensive documentation to access financial services is a significant hurdle for BPL groups, who often lack the necessary paperwork(Rather & Lone, 2012).

Systemic and Institutional BarriersThe costs associated with digital transactions can be prohibitive for BPL individuals, discouraging their use of digital financial services(Rather & Lone, 2012).Due to the inaccessibility of formal financial services, many BPL individuals rely on informal credit sources, which can be exploitative(Rather & Lone, 2012).While digital financial services have the potential to enhance financial inclusion, they also pose risks such as predatory lending and data misuse, which can further marginalize BPL groups. Policymakers must carefully design and regulate these services to mitigate such risks and ensure that digital financial inclusion efforts do not inadvertently increase inequalities(Mpofu, 2024).

Methodology

This research adopts a qualitative, multi-source approach. Sources include peer-reviewed academic articles, government and NGO reports, policy documents, and field studies focused on digital financial inclusion in Madhya Pradesh. Data from the Reserve Bank of India (RBI), National Payments Corporation of India (NPCI), and Ministry of Finance are used to supplement secondary research. Where available, past historical evidences and field surveys conducted in rural and tribal districts of Madhya Pradesh (such as Mandla, Dindori, and

Sehore) provide empirical grounding to the analysis. The study also draws on interviews and testimonies published in reputable media outlets and research organizations.

Overview of Digital Financial Inclusion in Madhya Pradesh

Madhya Pradesh, located in central India, is the country's second-largest state by area and fifth-largest by population. The state is characterized by a predominantly agrarian economy, diverse tribal communities, and persistent developmental challenges. According to the Census of India (2011), over 70% of Madhya Pradesh's population resides in rural areas, and the state is home to a significant tribal population, including the Gond, Bhil, and Baiga communities.

Financial inclusion has long been a policy priority in the state. The Pradhan Mantri Jan Dhan Yojana (PMJDY), launched in 2014, aimed to provide every household with access to a bank account. As of December 2023, over 60 million Jan Dhan accounts were operational in Madhya Pradesh (Ministry of Finance, 2023). Digital payment platforms such as UPI, Aadhaar-enabled Payment Systems (AePS), and Direct Benefit Transfers (DBT) for welfare schemes have been rolled out extensively.

Despite these achievements, the digital divide remains stark. Research by the National Council of Applied Economic Research (NCAER, 2022) indicates that only 38% of rural households in Madhya Pradesh have access to a smartphone, and less than 50% have reliable internet connectivity. The digital divide is further accentuated by factors such as gender, caste, and literacy.

Challenges Faced by BPL Groups in Digital Financial Inclusion

1. Infrastructural Deficits

A primary barrier to digital financial inclusion in Madhya Pradesh is the lack of reliable physical and digital infrastructure, particularly in rural and tribal areas. Many villages still lack basic banking infrastructure, including branches, ATMs, and banking correspondents. According to the World Bank (2020), only 30% of the villages in the state have a bank branch within a 5-kilometer radius.

Internet connectivity is another major challenge. The BharatNet project, which aims to provide broadband connectivity to all gram panchayats, has made progress but remains incomplete in many districts. Frequent power shortages and slow internet speeds make it difficult for BPL households to access digital platforms, especially during peak hours or adverse weather conditions.

The lack of local banking correspondents further complicates matters. In some tribal districts, one banking correspondent may be responsible for multiple villages, making regular access to financial services difficult. ATM penetration is low, and cash-in/cash-out points are often located far from remote villages. These infrastructural gaps create a "last mile" problem that disproportionately affects BPL households.

2. Digital Literacy and Education

Digital financial inclusion presupposes that individuals possess basic digital literacy—the ability to use digital devices, navigate financial apps, and understand digital transaction processes. However, digital literacy among BPL populations in Madhya Pradesh remains alarmingly low. A 2022 survey by the Digital Empowerment Foundation found that less than 25% of adults in rural Madhya Pradesh could perform basic tasks on a smartphone, such as installing an app, sending a text, or making a digital payment.

Many BPL users are first-generation mobile phone owners, and the transition from feature phones to smartphones is neither smooth nor universal. The lack of digital skills is compounded by low general literacy rates, especially among women and older adults. As a result, many BPL households depend on intermediaries—family members, local shopkeepers, or banking correspondents—to access digital financial services, increasing their vulnerability to fraud and exploitation.

3.Socio-Cultural and Gender Barriers

Madhya Pradesh is marked by deep-rooted social hierarchies, gender norms, and cultural practices that shape access to digital technologies. In many rural and tribal communities, women's mobility and agency are restricted. A 2021 study by UN Women found that only 18% of women in rural Madhya Pradesh owned a mobile phone, compared to 62% of men. The digital gender gap is even wider among BPL households, where women's access to digital devices is often mediated by male family members.

Caste-based exclusion is another persistent challenge. Dalit and tribal communities frequently face discrimination in accessing banking services and are often the last to benefit from new technologies. Language barriers further impede access. While most digital financial services are available in Hindi or English, many tribal populations speak Gondi, Bhili, or other regional dialects. The lack of vernacular interfaces makes it harder for these communities to use digital platforms confidently.

4.Affordability and Access to Devices

Affordability remains a significant barrier for BPL households in Madhya Pradesh. While smartphone prices have declined and data plans have become more affordable, the cost is still prohibitive for families living on subsistence incomes. Many BPL households rely on basic feature phones, which support only limited digital financial services via USSD or SMS. Shared devices are common, raising concerns about privacy and security.

Moreover, the costs of maintaining devices—charging, repairs, data recharges—are not trivial for BPL families. A 2022 study by the National Council of Applied Economic Research found that the median monthly expenditure on mobile services among BPL households was just ₹75, barely enough to cover basic connectivity.

5.Trust Deficit and Fear of Fraud

A significant barrier to digital financial inclusion is the pervasive lack of trust in digital financial systems. Incidents of phishing, unauthorized transactions, and digital payment failures are frequently reported in Madhya Pradesh. Many BPL users are wary of using digital platforms due to the fear of losing their hard-earned money. A 2022 RBI report noted a 20% increase in reported digital financial frauds among rural users in Madhya Pradesh over the previous year.

Negative experiences—such as failed transactions, delayed refunds, or unresponsive customer support—further erode trust. This trust deficit is exacerbated by a lack of understanding of digital systems, leading to reluctance or outright refusal to use digital financial services.

- **Language Barriers**

Language is a critical yet often overlooked barrier in digital financial inclusion. Most digital financial interfaces are available in Hindi and English, but many BPL users in Madhya Pradesh, particularly tribal populations, are more comfortable in local languages. The absence of vernacular language support in banking apps and digital payment platforms limits accessibility and increases the risk of errors during transactions.

- **Inadequate Support and Grievance Redressal**

BPL users often lack access to effective support and grievance redressal mechanisms when digital transactions fail or go awry. Banking correspondents, who serve as the first point of contact for many rural users, may themselves lack adequate training in digital finance. The process for resolving digital payment disputes is often cumbersome and slow, leading to frustration and discouragement.

Threats to BPL Groups in the Digital Financial Ecosystem
1. Cybersecurity Risks
BPL populations are particularly vulnerable to digital financial fraud due to limited digital literacy and a lack of awareness about cybersecurity best practices. Common threats include phishing attacks, SIM card swapping, fake calls from fraudsters posing as bank officials, and unauthorized access through compromised devices (CERT-In, 2022).
The consequences of such fraud are especially severe for BPL families, who may lose their only savings or critical welfare payments. The lack of robust cybersecurity education and preventive mechanisms in rural and semi-urban areas leaves BPL users exposed.

2.Data Privacy and Surveillance
The proliferation of Aadhaar-linked digital services and the widespread use of biometric authentication raise serious concerns about data privacy and surveillance. BPL groups, with limited understanding of their data rights, may unknowingly consent to the misuse or sharing of their personal information. Cases of identity theft and data leaks have been documented in Madhya Pradesh, often with devastating consequences for affected families (Khera, 2019).
The risk of surveillance is not merely theoretical. There have been instances where sensitive personal data has been used for profiling or exclusion from welfare schemes, further marginalizing vulnerable groups.

3.Exclusion from Welfare Benefits
Digital-only delivery of welfare schemes, while efficient, can inadvertently exclude those who lack access to digital tools or face authentication failures. Biometric mismatches with Aadhaar, network outages during DBT transfers, and errors in account linkage have resulted in BPL families being denied critical subsidies and benefits.

A 2019 study by Drèze et al. found that nearly 14% of eligible beneficiaries in Madhya Pradesh had experienced at least one instance of exclusion from food subsidies due to digital authentication failures. For BPL households, such exclusions can have life-threatening consequences.

4.Gendered Threats
Women in BPL households face specific threats in the digital financial ecosystem. Lack of control over digital devices, risk of domestic surveillance, and increased vulnerability to

financial abuse by family members are common issues. Digital exclusion compounds existing gender inequalities, limiting women's ability to benefit from financial inclusion and welfare schemes.

UN Women (2020) notes that digital platforms can also be used to monitor or restrict women's financial transactions, reinforcing patriarchal control over household finances.

5.Algorithmic Bias and Automation

The increasing use of automated decision-making tools in banking and financial services introduces new risks for marginalized groups. Algorithms trained on biased data may inadvertently exclude BPL, Dalit, or tribal users from access to credit, insurance, or other financial products (Narayanan et al., 2016). Lack of transparency and accountability in these systems exacerbates the risk of exclusion.

Past Historical Event
Past Historical Event 1: Digital Exclusion in Tribal Madhya Pradesh

A field study conducted by Singh and Agarwal (2022) in Mandla and Dindori districts highlighted the multiple layers of exclusion faced by tribal households. Poor connectivity, language barriers, and the absence of nearby bank branches were recurring issues. Women reported being unable to withdraw DBT payments due to biometric authentication failures and lack of support from banking correspondents. In one village, over 40% of eligible women had missed at least one welfare payment due to digital barriers.

Past Historical Event 2: Digital Fraud in Rural Sehore

In Sehore district, a BPL farmer lost his entire PM-Kisan installment after being tricked by a fraudster impersonating a bank official. The fraudster obtained the farmer's Aadhaar and account details and withdrew the money using an AePS device. The lack of prompt grievance redressal and digital awareness left the family without recourse (RBI, 2022).

Past Historical Event 3: The Digital Gender Divide in Balaghat

A 2021 survey in Balaghat district found that less than 12% of women in BPL households owned a mobile phone. Women reported relying on male relatives to access financial services, leading to restricted autonomy and increased vulnerability to financial abuse. Several women reported being unaware of government welfare payments credited to their accounts, as male family members controlled access to both devices and bank accounts.

Past Historical Event 4: Language Barriers in Jhabua

In Jhabua, a predominantly tribal district, banking correspondents noted that many clients struggled to use digital financial services due to the lack of Gondi or Bhili language support in apps and ATMs. Errors during transactions were common, often resulting in failed payments or accidental transfers.

Discussion

The analysis above illustrates that digital financial inclusion for BPL groups in Madhya Pradesh is not solely a technological challenge. It is deeply intertwined with issues of infrastructure, literacy, trust, socio-cultural exclusion, and institutional capacity. The digital divide in Madhya Pradesh mirrors and often reinforces existing social and economic inequalities.

Addressing these challenges requires a holistic, multi-dimensional approach. Simply expanding access to digital financial platforms is insufficient. Policymakers and practitioners must also address the underlying social, cultural, and economic barriers that shape the experience of BPL groups.

Key factors for successful digital financial inclusion include:

- Context-sensitive digital literacy programs targeted at BPL and marginalized groups, tailored to local languages and socio-cultural realities.
- Investment in last-mile infrastructure, including reliable internet, power, and banking correspondents in remote areas.
- Robust cybersecurity awareness campaigns and fraud prevention mechanisms for vulnerable groups.
- Gender-sensitive policies that empower women to access and control digital financial tools.
- Strengthening grievance redressal mechanisms and ensuring human support at the grassroots.
- Inclusive design of digital products, with vernacular language support and intuitive interfaces.

Policy Recommendations

1. Expand and Upgrade Digital Infrastructure

The government, in collaboration with the private sector, must prioritize the expansion of reliable internet and power connectivity in rural and tribal areas. The completion and maintenance of the BharatNet project should be fast-tracked, with a focus on last-mile connectivity. Incentives should be provided to telecom companies to extend coverage to underserved areas.

2.Tailored Digital Literacy Campaigns

Digital literacy initiatives must go beyond basic training. Programs should be culturally relevant, delivered in local languages and dialects, and tailored to the specific needs of BPL groups. Special attention should be given to women, older adults, and tribal communities. Partnerships with local NGOs and community organizations can enhance the reach and effectiveness of such programs.

3.Strengthen Cybersecurity Awareness

Banking correspondents, local officials, and community leaders should be trained to educate users about common digital frauds, safe practices, and mechanisms for reporting cybercrimes. The government should run mass awareness campaigns on digital safety, using radio, mobile vans, and local gatherings.

4.Improve Grievance Redressal Systems

Banks should strengthen local support systems, such as helplines, mobile banking camps, and trained banking correspondents, to assist BPL users in resolving transaction issues promptly. Simplified and accessible complaint resolution mechanisms should be established, with clear timelines and accountability.

5.Inclusive Design of Digital Products

Digital financial services should be co-designed with input from BPL users, ensuring that interfaces are simple, intuitive, and accessible in multiple languages and dialects. Financial institutions should invest in user testing and feedback mechanisms in rural and tribal areas.

6.Monitor and Address Gendered Exclusion

Policymakers must collect gender-disaggregated data on digital financial inclusion and design interventions to address the specific barriers faced by women. Programs to increase women's ownership of mobile phones and control over financial accounts are essential.

7.Regulate and Monitor Algorithmic Decision-Making

Financial institutions should be required to regularly audit their algorithms for bias and exclusion. Transparency and accountability mechanisms must be established to ensure that automated systems do not discriminate against BPL, Dalit, or tribal users.

8.Enhance Data Privacy and Security Protections

Stronger data protection laws and enforcement mechanisms are needed to safeguard the privacy and rights of BPL users. Clear consent protocols, data minimization, and user-friendly privacy policies should be mandated for all digital financial service providers.

Conclusion

Digital financial inclusion holds enormous promise for transforming the lives of BPL groups in Madhya Pradesh. Yet, the journey is fraught with challenges and threats that risk leaving the most vulnerable further behind. The state's experience underscores that technology alone cannot bridge the digital divide. A holistic and inclusive approach—combining infrastructure, literacy, security, gender sensitivity, and institutional support—is essential to ensure that digital financial inclusion becomes a true engine of equity and empowerment.

Sustained policy commitment, innovative partnerships, and community involvement are key to overcoming the barriers identified in this paper. As digital technologies continue to reshape the financial landscape, ensuring that every citizen, regardless of income, gender, caste, or location, can participate fully and safely in the digital economy is both a moral imperative and an economic necessity.

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