

## A STUDY OF CHALLENGES FACED BY RURAL POPULATION OF MAHARASHTRA IN ADAPTING AND MAKING DIGITAL PAYMENTS

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### Abstract

Digital payments have revolutionized financial transactions in India especially after the demonetisation of 2016 and the proliferation of the Unified Payments Interface (UPI). While urban areas have rapidly adopted this technology, rural areas like Maharashtra have been left behind due to infrastructural, educational and socio-economic barriers. This study examines the challenges of adapting the rural population of Maharashtra to digital payment systems. Based on a preliminary survey of 250 respondents in six districts, the research identified key issues: limited digital literacy, lack of infrastructure (Internet and electricity), trust and security concerns, and gaps in financial inclusion.

**Keywords:** Digital Payments, Unified Payments Interface (UPI), Financial Transactions, Rural Areas.

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### Introduction

Digital payments are electronic or online money transfers and financial transactions done without physical cash through digital platforms. In India, digital payment methods—such as mobile banking, UPI, wallets, and bank transfers—have grown rapidly (RBI, 2021). The Indian government's drive towards a cashless economy has emphasized financial inclusion in rural areas. However, rural areas still struggle to adopt digital payments, especially in hilly states like Maharashtra where geography, literacy and lack of resources exacerbate the problem (Singh and Mishra, 2020).

### Research Problem

Despite country-wide initiatives like Digital India and Financial Inclusion Roadmap, the rural population of Maharashtra faces significant challenges in using digital payment platforms. Understanding these challenges is essential to creating effective solutions.

### Objectives

- Identify socio-economic and technological barriers to adoption of digital payments.
- Explore issues of perception and trust related to digital transactions.
- Suggest solutions to policy makers to increase digital payment payments.

## Research Methodology

### 1. Research Design

A **cross-sectional survey** was conducted with structured questionnaires administered in person and digitally between January and February 2026.

### 2. Sample Selection

**Purposive sampling** was used to select respondents from four districts:

Sr. No.	Districts	Respondents
1	Dhule	70
2	Jalgaon	100
3	Nandurbar	70
4	Nashik	100
	Total	340

A total of **340 rural respondents** aged 18–65 participated.

The survey used Likert scales, multiple-choice, and open-ended questions.

### 3. Data Analysis

Quantitative responses were analyzed using descriptive statistics; qualitative responses were coded to identify themes.

#### Data Analysis

##### 1. Demographics

Variable	Category	Percentage
Gender	Male	60%
	Female	40%
Age	18–30	30%
	31–50	45%
	51–65	25%
Education	Primary	22%
	Secondary	32%
	Higher	46%

##### 2. Device & Internet Access

Sr. No.	Description	Percentage
1	Electricity interruptions weekly	28%
2	Smartphone ownership	72%
3	Regular internet connectivity	52%

##### 3 Adoption Frequencies

Sr. No.	Frequency	Percentage
1	Regular use	30%
2	Occasional	32%
3	Rare	28%
4	Never	10%

#### **4 Challenges Identified**

<b>Sr. No.</b>	<b>Description</b>	<b>Percentage</b>
1	Digital Literacy	60%
2	Security & Trust Issues	45%
3	Infrastructure Limitations	40%
4	Cultural Preferences	30%
5	Gender Disparities	20%

#### **Discussion**

Digital payment systems in India have been developing at a fast pace, especially after the demonetization drive in 2016 and the subsequent development of UPI and other platforms. Nevertheless, despite the development, the rural regions of Maharashtra are still facing some challenges in embracing digital payment systems.

##### **1. Digital Illiteracy and Lack of Awareness**

The first and most important challenge is the lack of digital literacy. The rural population of Maharashtra is still struggling with the following:

- They do not know the basics of smartphone operating systems.
- They are not aware of mobile applications and online banking.
- They do not understand the transaction process, including OTP verification.

Older people and those who have not received formal education find digital platforms confusing. They are afraid of clicking the wrong button and losing money.

##### **2. Poor Internet Connectivity and Infrastructure**

Although Maharashtra is one of the most developed states in India, some rural areas, especially the tribal regions, are still facing issues such as:

- Poor mobile network connectivity.
- Slow internet speed.
- Frequent power cuts.

Digital payment systems need proper internet connectivity. Failure of transactions due to poor internet connectivity is reducing trust and causing frustration among users.

##### **3. Limited Availability of Smartphones and Banking Services**

Not all rural households possess smartphones. Some issues include:

- High cost of smartphones
- Sharing mobile phones within families
- Absence of bank branches and ATMs

Rural women are limited in their use of personal mobile phones, thereby restricting their engagement with digital financial services.

##### **4. Lack of Trust and Fear of Fraud**

Cyber fraud and trickery are significant barriers. Some issues include:

- Fraudulent calls and requests for OTP
- Fear of losing hard-earned money
- Unawareness about the grievance redressal process

If a person in a rural village is cheated, the entire village is filled with fear.

##### **5. Language and Interface Issues**

Although regional languages are used in most digital payment applications, some issues still exist:

- Technical words are hard to comprehend
- English dominance in some applications

- Low awareness about financial words

This makes rural customers apprehensive about using digital applications on their own.

### **6. Cultural Preference for Cash-Based Transactions**

Cash-based transactions are deeply embedded in rural economies because of:

- Habit and familiarity
- Sense of control over cash
- Credit facilities between farmers and local vendors

Digital payments appear less personal and less trustworthy compared to cash transactions.

### **7. Low Merchant Acceptance in Villages**

In rural markets, the following conditions are common:

- Small merchants do not have QR codes or POS devices
- Merchants prefer cash to avoid payment transaction fees
- Little awareness about digital advantages among merchants

Without digital acceptance by merchants, customers will not have a reason to use digital.

### **8. Irregular Income Patterns of Rural Households**

In rural areas, agricultural incomes are seasonal and irregular. Farmers receive:

- Batch payments during harvest seasons
- Cash payments for daily labor

This irregular income pattern leads to less frequent digital use.

### **9. Gender Gap in Digital Adoption**

There is a large digital gap between males and females in rural Maharashtra:

- Females rely on male relatives for mobile access
- Females have less exposure to digital technology
- Societal restrictions on technology use

This further increases financial inclusion disparities.

## **Recommendations**

### **1. Enhance Digital & Financial Literacy at the Grassroots Level**

Community Training Sessions

- Arrange digital literacy camps in villages via panchayats, NGOs, and rural self-help groups.
- Conduct training in local languages (Marathi, rural dialects) with modules on:
  - How to use UPI, QR codes, and wallets
  - Identifying trustworthy websites and steering clear of scams
  - Fundamentals of cybersecurity (passwords, OTP protection)

Peer Trainers

- Train youth volunteers and Anganwadi/ASHA staff as digital payment evangelists.
- Offer rewards (certificates, small honorariums) to local trainers.
- Audio-Visual Aids & Gamification
- Prefer audio-visual aids, cartoons, and interactive training over text-based content.
- Utilize local community radios and WhatsApp voice messages for training.

### **2. Upgrade Digital & Network Infrastructure**

Enhance Connectivity

- Collaborate with private telecom operators and government initiatives to enhance mobile network and internet connectivity in rural pockets.
- Encourage the setting up of public Wi-Fi spots in village centers and Gram Panchayat offices.

Stable Power Supply

- Ensure constant power supply to payment points – particularly POS machines at kirana shops.
- Advocate solar-powered charging points in areas with unreliable mains power.

### **3. Improve Accessibility of Digital Payment Services**

#### Local Facilitation Centers

- Open Digital Service Points at:
  - Gram Panchayat offices
  - Cooperative banks
  - Post offices
  - Local shops
- These are help desks for:
  - UPI setup
  - Bank account linking
  - Txn issues

#### Low-Cost Devices & Solutions

- Advocate low-cost feature phones with UPI through USSD/IVR for those without smartphones.
- Advocate simplified QR codes in markets (large & prominent).

### **4. Foster Trust & Overcome Fear of Digital Fraud**

#### Awareness Campaigns

- Organize campaigns on:
  - Authentic sources of digital payments
  - How to avoid phishing & scams
  - Password & biometric protection
  - Utilize local influencers & farmers' associations to disseminate authentic information.
  - Helpline & Support
- Establish toll-free helplines with Marathi-speaking support staff for:
  - Fraud reporting
  - Txn assistance
  - Block lost/stolen devices

### **5. Incentives & Rewards for Adoption**

#### Transaction Rewards

- Offer cashbacks, discount coupons, or small rewards for:
  - First UPI transaction
  - Regular digital payments
  - Payments above a minimum amount
- Recognition for Villages
- Identify villages with high digital payment adoption rates on a monthly/quarterly basis with rewards or village resources.

### **6. Public-Private Partnerships & Integration**

#### Collaborations with Banks & Fintechs

- Banks can increase the number of customer service agents in rural areas to assist with app handling and account linking.
- Fintechs can create local language UIs and user manuals.

#### Regular Digital Bazaar Days

- Weekly digital payment days in market areas where:

- All merchants accept digital payment
- Support staff are available to assist customers

### **7. Tailor Solutions for Specific Rural Needs**

#### Agriculture-Driven Interfaces

- Design agri-related payment flows (e.g., for subsidy payments, mandi payments).
- Interface with eNAM (Electronic National Agriculture Market) to facilitate smooth digital payment settlement for farmers.

#### Support for Elderly & Less Educated Users

- Enable voice navigation in apps.
- Offer one-touch payment options with simpler instructions.

### **8. Monitor Impact & Use Feedback Loops**

#### Field Surveys

- Periodically measure:
- Adoption rates
- Transaction failure rates
- User pain points
- Refine training and tools based on feedback.

### **Conclusion**

Maharashtra's rural population faces significant challenges in adapting to digital payments, influenced by infrastructure gaps, limited digital literacy and socio-cultural preferences. Bridging this divide requires a concerted effort by governments, financial institutions and civil society. Improving digital literacy, infrastructure and trust can increase financial inclusion and empower rural communities to participate in the digital economy. In rural Maharashtra, the potential of digital payments has yet to be fully realized. The factors that contribute to this are the lack of infrastructure, low digital literacy, financial constraints, and trust issues, which are significant obstacles that impede adoption. Even if digital solutions are already available, these factors can impair the usage and trust of rural communities. To make progress in this area, it is not only necessary to implement technology but also to educate and develop infrastructure to ensure that digital payments benefit rural society.

### **References**

1. Reserve Bank of India (RBI). (2021). Report on Digital Payments. Retrieved from <https://rbi.org.in>
2. Digital Infrastructure and Literacy in Rural India, Practice Questions, Drishti IAS, 2025.
3. Sharma, P., & Gupta, A. (2021). Digital Divide in Himalayan States: An Analysis of Rural Technology Access. *Indian Journal of Development Studies*, 15(4), 112–130.
4. Challenges Faced by Rural Population of Uttarakhand in Adapting and Making Digital
5. Payments by Dr. Piyush Singh Pokharia published in *International Journal for Multidisciplinary Research (IJFMR)* E-ISSN: 2582-2160 • Website: [www.ijfmr.com](http://www.ijfmr.com) • Email: [editor@ijfmr.com](mailto:editor@ijfmr.com)