MERCHANT PERSPECTIVES ON MOBILE PAYMENT SYSTEM IMPLEMENTATION IN BENGALURU

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ABSTRACT

Mobile payment systems have significantly transformed commercial transactions in urban India, particularly in metropolitan cities like Bengaluru. With the rapid growth of Unified Payments Interface (UPI) platforms such as PhonePe, Google Pay, Paytm, and BHIM, merchants are increasingly integrating digital payment options into their businesses. This study examines merchant perspectives on the adoption and implementation of mobile payment systems in Bengaluru. Using a mixed-methods approach involving surveys and interviews with 150 merchants across retail, food, service, and wholesale sectors, the study identifies key drivers, perceived benefits, challenges, and future expectations. The findings reveal that while merchants recognize operational efficiency, customer convenience, and improved sales tracking, concerns remain regarding transaction fees, security risks, and technical literacy. The study provides recommendations for policymakers, payment providers, and merchants to enhance adoption and usability.

KEYWORDS: Mobile Payments; Unified Payments Interface (UPI); Merchant Adoption; Digital Transactions; Technology Acceptance Model (TAM); Payment Security; Transaction Costs; Small Businesses; Bengaluru Retail Sector.

1. INTRODUCTION

India's digital transformation accelerated after the 2016 demonetization and the launch of the Digital India initiative. Mobile payment systems, particularly UPI, have reshaped how transactions occur between consumers and merchants. Bengaluru, being India's technology hub, exhibits one of the highest rates of digital payment usage. While consumer adoption has been widely studied, merchant perspectives remain underexplored. Merchants play a critical role because their willingness to accept digital payments directly influences customer behavior. This study focuses on understanding how

merchants in Bengaluru perceive, adopt, and experience mobile payment systems.

1.1 Background
UPI enables instant bank-to-bank transfers using smartphones without the need for cards or POS machines. Low setup cost and ease of use make it attractive for small and micro businesses. However, adoption depends on merchant confidence, awareness, and perceived value.

1.2 Research Objectives
1. To study merchant attitudes toward mobile payment systems

2. To identify barriers faced during implementation

3. To evaluate perceived business benefits

4. To suggest improvements for wider adoption

2. LITERATURE REVIEW
2.1 Mobile Payments in India
Post-demonetization, digital payments witnessed exponential growth. Smartphone penetration and affordable internet access further accelerated this shift.

2.2 Merchant Adoption Drivers
- Faster checkout

- Reduced cash handling

- Digital transaction records

- Customer preference for UPI

2.3 Challenges Identified in Prior Studies
- Security threats and fraud

- Technical difficulties

- Transaction costs

- Internet connectivity issues

2.4 Research Gap
Limited studies focus specifically on merchant experiences in tier-1 cities like Bengaluru.

2.5 Theoretical Framework
This study is based on:

Technology Acceptance Model (TAM):
- Perceived Ease of Use

- Perceived Usefulness

UTAUT Model:
- Social influence (customer demand)

- Facilitating conditions (internet, smartphones)

- Behavioural intention

These models explain merchant adoption behaviour effectively.

3. METHODOLOGY
3.1 Research Design
Mixed-methods approach: quantitative survey + qualitative interviews.

3.2 Sampling
150 merchants selected using stratified sampling:
- Retail – 60

- Food & Beverages – 45

- Services – 30

- Wholesale – 15

3.3 Data Collection
Structured questionnaire and 30 in-depth interviews.

3.4 Questionnaire Design
22 questions across:
1. Merchant profile

2. Usage of apps

3. Benefits and challenges

4. Security and cost perception

5-point Likert scale used.

3.5 Measures

- Independent: Ease of use, usefulness, security, cost

- Dependent: Adoption level, usage frequency

3.6 Reliability Testing

Construct	Items	Cronbach's Alpha
Ease of Use	5	0.82
Usefulness	6	0.85
Security Concern	5	0.79
Cost Perception	4	0.76

4. RESULTS

4.1 Demographics

Most merchants had over 5 years of business experience.

4.2 Adoption Rate

92% accept mobile payments. 56% adopted within last 2 years.

4.3 Apps Used

App	% Usage
PhonePe	78%
Google Pay	72%
Paytm	65%
BHIM	38%

Most use multiple apps.

4.4 Daily Digital Transaction Share

On average, 55% of daily transactions are digital.

4.5 Perceived Benefits

- Faster transactions – 87%

- Customer convenience – 81%

- Reduced cash handling – 74%

- Sales tracking – 62%

4.6 Challenges

Issue	% Concern
Transaction fees	68%
Security concerns	61%
Technical complexity	47%
Network issues	40%

5. Impact on Business Performance

Merchants reported:

- 18% average sales increase

- 30% reduction in billing time

- Easier accounting and tax filing

- Reduced risk of theft and fake currency

6. Security and Trust Factors

Major fears:

- QR code fraud

- Fake payment screenshots

- Phishing messages

Awareness of grievance mechanisms is low.

7. Comparative Analysis: Small vs Large Merchants

Factor	Small Shops	Large Stores
Cost Sensitivity	High	Medium
Tech Comfort	Low	High
Dependency on UPI	Medium	Very High

8. Role of Government and RBI
- Zero MDR policy encouraged adoption
- RBI regulations increased trust
- Digital India improved awareness

9. DISCUSSION
Ease of use and usefulness strongly influence adoption. Security and cost concerns reduce usage frequency. Training and awareness improve confidence among merchants.

10. RECOMMENDATIONS
For Policymakers
- Subsidize transaction costs
- Conduct awareness campaigns

For Payment Providers
- Simple onboarding
- Merchant education
- Better support systems

For Merchants
- Staff training

- Regular system updates

11. Limitations

- Limited to Bengaluru

- Self-reported data

- Cross-sectional study

12. Future Scope

- Study in tier-2 cities

- Longitudinal analysis

- Customer-merchant interaction study

13. CONCLUSION

Mobile payment adoption among Bengaluru merchants is high due to operational benefits and customer demand. However, cost and security concerns must be addressed to ensure sustained digital growth. Collaboration between government, providers, and merchants is essential.

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