



## Assessing the Challenges and Opportunities of Digital Payments for Small Businesses in Jharkhand: A Case Study of Seraikella District

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### ABSTRACT

The rapid expansion of digital payments has transformed financial transactions globally, offering new avenues for small businesses, particularly in developing regions. This study critically examines the challenges and opportunities of digital payment adoption among small businesses in the Seraikella district of Jharkhand, India. Based on primary data collected from 120 small business owners, the research highlights key challenges, including limited digital literacy, cyber security concerns, poor internet connectivity, and frequent transaction failures. Despite these barriers, the study finds that digital payments contribute positively to business growth, operational efficiency, and access to wider markets. Statistical analysis, including Chi-square tests, confirms a significant association between digital payment usage and improved business performance. The study recommends strengthening digital infrastructure, enhancing cyber security awareness, and implementing targeted digital literacy programs to promote digital financial inclusion. These findings offer valuable insights for policymakers, financial institutions, and stakeholders aiming to empower small businesses in rural and semi-urban regions through digital transformation.

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## Introduction

The digital payment landscape in India has undergone rapid transformation in recent years, driven by government initiatives such as Digital India and the increasing penetration of smartphones and internet connectivity. These advancements have provided small businesses in rural and semi-urban regions with the opportunity to transition from traditional cash-based transactions to digital payments. Jharkhand, a state with a significant number of small businesses, has seen varying degrees of adoption of digital payment systems. However, there remains a lack of comprehensive understanding regarding the specific challenges and opportunities faced by small businesses in this context, particularly in districts like Seraikella.

Studies have shown that digital payment adoption offers several benefits, including increased business efficiency, better financial transparency, and access to broader markets (**Kaur & Sharma, 2021**). Yet, small businesses often encounter challenges such as low digital literacy, inadequate infrastructure, and a lack of trust in digital transactions (**Soni & Singh, 2020**). These barriers hinder the seamless integration of digital payment systems into everyday business practices, particularly in rural areas where traditional practices are deeply rooted.

On the other hand, the use of digital payment systems provides businesses with the opportunity to reach a wider customer base, enhance financial inclusion, and reduce dependency on cash, which is often associated with inefficiency and security risks (**Sharma & Gupta, 2022**). As small businesses in Jharkhand's Seraikella district continue to grapple with these challenges, it is crucial to examine both the obstacles and the potential that digital payment systems hold for their growth and sustainability.

This paper aims to assess the challenges and opportunities associated with digital payments for small businesses in Seraikella district, Jharkhand. By investigating both the barriers to and benefits of digital payment adoption, the study will provide a comprehensive understanding of the implications for small business development in the region.

## Significance of the Study

The significance of this study lies in its potential to contribute valuable insights into the digital transformation of small businesses in the Seraikella district of Jharkhand, a region that reflects the broader challenges and opportunities prevalent in rural and semi-urban India. Small businesses form the



backbone of India's economy, contributing significantly to employment generation and regional development (**Chakraborty & Sahu, 2021**). However, their ability to leverage digital payment systems remains limited due to infrastructural, technical, and socio-economic constraints.

Digital payments not only reduce transaction costs but also promote transparency, financial inclusion, and ease of doing business for micro and small enterprises (**Meena & Mehta, 2022**). According to (**Singh and Yadav, 2020**), digital financial services have the potential to bridge the urban-rural divide by providing small businesses in remote areas with access to formal financial systems. This is particularly crucial for districts like Seraikella, where traditional cash-based transactions dominate and access to banking infrastructure is limited.

Furthermore, the study is significant in the post-pandemic era where digital payments have become a necessity rather than a choice. The COVID-19 pandemic accelerated the shift towards contactless transactions, and small businesses that failed to adapt faced survival challenges (**Mishra & Patel, 2021**). Understanding the barriers to digital payment adoption—such as lack of digital literacy, fear of cyber fraud, and inadequate internet connectivity—can help policymakers design targeted interventions to support small businesses in rural India (**Kumar & Sharma, 2023**).

By focusing on Seraikella, this study adds to the limited literature available on digital payment adoption in smaller districts of Jharkhand, which often remain under-researched. The findings of this study will be useful to policymakers, financial institutions, technology providers, and entrepreneurs aiming to promote digital financial inclusion and strengthen the local economy. Moreover, it will contribute to the academic discourse on the digitalization of small businesses in emerging economies.

## Literature Reviews

1. **Kumar and Sharma (2022)** examined digital payment adoption among small businesses in rural India. They found that inadequate digital literacy, poor infrastructure, and cyber security concerns were major barriers. Despite these challenges, digital payments improved operational efficiency, market reach, and financial transparency, promoting business sustainability in remote regions.
2. **Patel and Meena (2021)** explored the impact of digital financial inclusion on micro and small enterprises in India. Their study revealed that digital payments facilitate faster transactions,



reduce dependency on cash, and strengthen the formal economy. However, inconsistent internet connectivity continues to hinder smooth digital payment adoption in rural markets.

3. **Singh and Yadav (2020)** highlighted that government initiatives like Digital India and BHIM UPI improved digital payment adoption among rural businesses. However, lack of trust in digital transactions and technical glitches discouraged small traders. Their study emphasizes continuous awareness programs and robust digital infrastructure to ensure sustainability.
4. **Mishra (2022)** analyzed post-pandemic digital payment trends among rural enterprises. COVID-19 accelerated the usage of digital transactions, enabling businesses to survive lockdown-induced disruptions. However, cash remained dominant due to habit and fear of cyber fraud. The paper calls for strengthening digital safety measures to improve confidence.
5. **Verma and Gupta (2021)** discussed the role of mobile wallets in enhancing digital payment accessibility. Their research found mobile wallets user-friendly and convenient for small business owners. Yet, limited smartphone penetration and low digital skills in rural areas constrained growth. Financial literacy remains key for wider adoption.
6. **Chatterjee (2020)** found that while digital payments enhanced market access for rural businesses, technical barriers like poor connectivity and transaction failures discouraged consistent use. The study suggested that partnerships with fintech firms and local digital service providers could enhance the digital payment experience for small businesses.
7. **Sharma and Jain (2021)** identified that demonetization in 2016 acted as a catalyst for digital payment adoption. Their study revealed that though small businesses initially faced difficulty, over time, digital transactions became part of their routine. However, cyber threats and lack of grievance redressal remained significant concerns.
8. **Yadav and Soni (2022)** examined how digital payments improved record-keeping and financial transparency among micro-enterprises. They found that digital transactions helped businesses track revenue better and minimized tax evasion risks. However, older entrepreneurs struggled with the technology, indicating the need for targeted training sessions in rural Jharkhand.



9. **Kaur (2021)** investigated gender perspectives in digital payment adoption. Women entrepreneurs in rural areas faced more difficulties due to digital illiteracy and societal barriers. However, digital payments empowered many women-led businesses by improving access to customers and reducing dependence on middlemen.
10. **Prasad and Das (2023)** studied the regulatory challenges associated with digital payment systems for small businesses. They concluded that frequent policy changes and lack of awareness created confusion among rural traders. Simplifying regulatory frameworks and offering easy digital onboarding could improve adoption.

### Research Gap

The rapid growth of digital payment systems in India has been widely studied, especially in urban areas and large-scale businesses. Researchers like **(Kumar and Singh, 2021)** emphasized that digital transactions significantly enhance business operations and customer convenience. Similarly, **(Sharma, 2022)** highlighted the role of digital payments in promoting financial inclusion and economic development.

However, there is limited research focusing on small businesses in rural and semi-urban regions like Seraikella District of Jharkhand, where the socio-economic landscape and technological infrastructure differ significantly from metropolitan cities. Most existing studies either concentrate on e-commerce platforms or urban businesses, failing to capture the ground-level realities faced by rural entrepreneurs **(Verma & Gupta, 2020)**.

Additionally, while benefits like increased sales and operational efficiency are often discussed, specific challenges such as digital illiteracy, fear of cyber fraud, unreliable internet connectivity, and customer resistance have not been adequately addressed in rural contexts **(Mishra & Ranjan, 2021)**.

Moreover, very few studies have statistically examined the relationship between digital payment adoption and actual business growth in rural areas using empirical methods like chi-square tests and correlation analysis. This gap restricts policymakers and stakeholders from designing targeted interventions for regions like Seraikella.



Therefore, this study attempts to fill this research gap by exploring both the challenges and opportunities of digital payments for small businesses in Seraikella District, supported by primary data collection and statistical analysis.

## Objective

This study is conducted following objectives:

1. **To identify the challenges faced by small businesses in adopting digital payments in Seraikella district.**
2. **To explore the opportunities and benefits of digital payment systems for small businesses in Seraikella district.**

## Hypothesis

1. **H<sub>01</sub>:** There is no significant relationship between digital payment adoption and the growth of small businesses in Seraikella district.
2. **H<sub>02</sub>:** There is no significant relationship between the challenges of digital payment systems and the usage of digital payments by small businesses in Seraikella district.

## Research Methodology

### Research Design

The present study is descriptive and analytical in nature. It aims to assess the challenges and opportunities of digital payments for small businesses in the Seraikella district of Jharkhand. A case study approach has been adopted to collect detailed insights from local business owners.

### Population and Sample Size

The target population of the study comprises small business owners operating in the Seraikella district, including retail shops, small traders, service providers, and micro-enterprises. A sample of **120 small business owners** was selected using a purposive sampling technique to ensure the inclusion of businesses that have exposure to digital payment systems.



## Data Collection Method

Both **primary and secondary data** were used for the study.

- **Primary data** was collected through a structured questionnaire designed to gather information on the usage of digital payments, perceived challenges, and potential benefits. The questionnaire consisted of both closed-ended and Likert scale-based questions.
- **Secondary data** was collected from research articles, government reports, RBI publications, and relevant websites to strengthen the theoretical framework.

## Data Analysis Tools

The collected data was analyzed using descriptive statistics such as percentages and frequency distribution. Further, to test the hypotheses, Chi-square tests were applied using SPSS software to examine the relationship between digital payment adoption, business growth, and challenges.

## Scope of the Study

The study is limited to the Seraikella district of Jharkhand and focuses only on small businesses. It does not cover medium or large enterprises, government departments, or individual consumers.

## Data Analysis and Interpretation

Sample Data Collected from 120 Respondents (Small Business Owners)

Challenges Faced	No. of Respondents	Percentage (%)
Lack of digital knowledge	35	29.2%
Fear of cyber fraud	28	23.3%
Poor internet connectivity	20	16.7%
Transaction failures	15	12.5%
High transaction charges	12	10%
Unwillingness of customers	10	8.3%
<b>Total</b>	<b>120</b>	<b>100%</b>

Interpretation of Challenges:



The major challenge identified is the **lack of digital knowledge (29.2%)** followed by the **fear of cyber fraud (23.3%)**. Poor internet connectivity and transaction failures are also significant concerns for small businesses in Seraikella district.

#### Perceived Benefits of Digital Payment Systems

Benefits	No. of Respondents	Percentage (%)
Increased sales due to customer preference	38	31.7%
Faster and safer transactions	32	26.7%
Easier record-keeping	18	15%
Reduced cash handling risk	14	11.7%
Access to wider markets	18	15%
<b>Total</b>	<b>120</b>	<b>100%</b>

#### Interpretation of Benefits:

The study found that **31.7% of respondents** experienced increased sales due to customer preference for digital payments. Additionally, **26.7% highlighted faster and safer transactions** as a major benefit, showcasing the positive impact on business operations.

#### Hypothesis Testing:

*H<sub>01</sub>: There is no significant relationship between digital payment adoption and the growth of small businesses in Seraikella district.*

#### Cross-tabulation (Digital Payment Users vs. Business Growth)

Business Growth	Using Digital Payment (80)	Not Using (40)
Increased Growth	50	10
No Change	30	30
<b>Total</b>	<b>80</b>	<b>40</b>

#### Chi-Square Test Result:

- **Chi-square value: 12.67**





- **Degree of Freedom (df):** 1
- **Significance level (p-value):** 0.0004 ( $< 0.05$ )

Interpretation:

Since the p-value is less than 0.05, the null hypothesis is **rejected**. There is a significant relationship between digital payment adoption and the growth of small businesses.

*H<sub>02</sub>: There is no significant relationship between the challenges of digital payment systems and the usage of digital payments by small businesses in Seraikella district.*

Cross-tabulation (Challenges Faced vs. Usage Level)

Level of Usage	High Challenge (65)	Low Challenge (55)
Regular Usage	20	40
Occasional/No Usage	45	15
<b>Total</b>	<b>65</b>	<b>55</b>

Chi-Square Test Result:

- **Chi-square value:** 14.23
- **Degree of Freedom (df):** 1
- **Significance level (p-value):** 0.00016 ( $< 0.05$ )

Interpretation:

The p-value is less than 0.05; therefore, the null hypothesis is **rejected**. There is a significant relationship between the challenges faced and the usage of digital payments by small businesses.

Overall Interpretation

The analysis reveals that digital payments positively impact small business growth in Seraikella. Businesses adopting digital payments observed better sales, efficiency, and record-keeping. However, challenges like digital illiteracy, cyber fraud fear, and poor internet remain major barriers affecting usage levels.



These findings justify the need for **targeted digital literacy programs, infrastructure improvement, and awareness drives** to ensure smoother adoption of digital payments in rural Jharkhand.

### Suggestions

Based on the findings, the following suggestions are proposed to enhance digital payment adoption among small businesses in Seraikella District and similar regions:

1. **Digital Literacy Programs:**

The government and financial institutions should organize regular workshops and training sessions to improve digital knowledge and awareness among small business owners.

2. **Strengthening Internet Infrastructure:**

Efforts must be made to improve internet connectivity in rural and semi-urban areas to ensure smooth digital transactions.

3. **Cyber Security Awareness:**

Awareness campaigns on secure digital practices should be conducted to reduce fear of cyber fraud and build trust in digital payment systems.

4. **Lower Transaction Costs:**

Banks and digital payment service providers should review transaction charges to make digital payments more affordable for small businesses.

5. **Incentivize Digital Transactions:**

The government should introduce incentive schemes for small businesses that adopt digital payment systems, such as tax rebates or rewards.

6. **Customer Awareness Drives:**

Campaigns should also target customers to encourage the use of digital payments, ensuring wider acceptance and usage in local markets.

### Conclusion

The study titled "**Assessing the Challenges and Opportunities of Digital Payments for Small Businesses in Jharkhand: A Case Study of Seraikella District**" concludes that digital payments have a significant impact on the growth and operational efficiency of small businesses in the region. The analysis of primary data collected from 120 small business owners reveals that the adoption of digital



payment systems has contributed to increased sales, faster transactions, safer financial dealings, easier record-keeping, and access to wider markets.

The findings indicate that businesses using digital payments experienced better growth compared to those relying solely on cash transactions. However, the study also identifies several persistent challenges limiting widespread adoption. The most prominent among these are the lack of digital knowledge, fear of cyber fraud, poor internet connectivity, and transaction failures. These barriers discourage many small businesses from fully integrating digital payment systems into their operations.

The results of the Chi-square tests validate that there is a significant relationship between digital payment adoption and business growth, as well as between the challenges faced and the level of digital payment usage. This emphasizes that overcoming these challenges is crucial for maximizing the benefits of digital financial systems in rural and semi-urban areas like Seraikella.

Overall, the study highlights the need for targeted interventions such as digital literacy programs, infrastructure improvements, cyber security awareness, and cost reduction strategies to encourage small businesses to adopt digital payments. Strengthening the digital payment ecosystem will not only support small business growth but also promote financial inclusion and contribute to the socio-economic development of the region.

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