

# The Impact of Digital Payment Systems on Consumer Behavior in Raipur, Chhattisgarh in 2017

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## Abstract:

This study explores the effects of digital payment systems on consumer behavior in Raipur, Chhattisgarh, during 2017, following the Indian government's demonetization in 2016. The research assesses how the shift from cash to digital payments has impacted consumer purchasing patterns, preferences, and behavior. It also examines the role of government policies, security concerns, and technological accessibility in driving the adoption of digital payments in this region. Data were collected through surveys of 300 consumers and 50 business owners, with statistical tools used to analyze adoption patterns and behavioral changes. The results reveal a significant rise in cashless transactions, particularly through UPI, and highlight the need for continued infrastructure development to foster broader adoption.

Keywords: digital payment, demonetization, government policies

## 1. Introduction:

### 1.1 Background

India's demonetization in November 2016, which led to the withdrawal of ₹500 and ₹1000 notes, was a significant move by the government to combat black money and promote a digital economy. The demonetization policy created a strong push for digital payment adoption, especially in urban areas, and the city of Raipur in Chhattisgarh was no exception. This research focuses on the impact of digital payments on consumer behavior in Raipur in 2017, following the demonetization drive.

### 1.2 Research Problem

Although numerous studies have explored the effects of digital payment systems in metropolitan cities, there is a lack of research on how smaller cities, like Raipur, were affected by the rapid growth of digital payment systems. This study intends to fill this gap by focusing on the adoption and implications of digital payments in Raipur.

### 1.3 Objectives

- To evaluate the adoption rate of digital payment methods in Raipur in 2017.
- To understand the changes in consumer behavior due to the use of digital payment systems.
- To analyze the role of government initiatives and technological advancements in facilitating digital payment adoption.

## 2. Literature Review:

### 2.1 Indian Literature on Digital Payments (Pre-2016 and Post-2016)

Before 2016, digital payment systems in India were limited to niche segments, especially in urban centers. Studies by **Srinivasan and Nair (2017)** and **Basu (2016)** discussed the slow but steady adoption of digital payments, facilitated by government policies like the introduction of the Aadhaar-based payment system and financial inclusion initiatives. However, the major push came after demonetization in 2016, when mobile wallets and UPI systems gained widespread attention, especially in small and medium-sized cities.

- **Kumar & Singh (2015)** observed that pre-2016, there was low consumer engagement with digital payments in non-metropolitan regions due to low internet penetration and traditional banking habits.
- Post-demonetization, **Srinivasan & Nair (2017)** noted a shift in consumer preferences, particularly in smaller cities, as people had to adapt to new methods of financial transaction due to the shortage of cash. The introduction of the government-supported UPI platform and mobile wallets like Paytm played a crucial role in driving this change.

## 3. Methodology:

### 3.1 Research Design

This study uses a mixed-methods design. Quantitative data were collected through a structured survey administered to 300 consumers in Raipur, while qualitative data were gathered through semi-structured interviews with 50 local business owners.

### 3.2 Sample Size and Population

The sample consisted of 300 consumers aged 18-60, with a diverse distribution across income groups and age demographics. Interviews were conducted with business owners from various retail sectors to understand how digital payments influenced their sales and operations.

### 3.3 Data Collection Techniques

The consumer survey focused on understanding usage patterns, preferences, and behavioral shifts post-demonetization. Business interviews aimed to explore how digital payments impacted business efficiency, customer reach, and satisfaction.

### 3.4 Statistical Tools

- Descriptive statistics were used to summarize key trends in consumer adoption.
- Chi-Square tests were employed to analyze relationships between socio-demographic factors (age, income, etc.) and digital payment usage.
- Regression analysis was applied to identify significant predictors of digital payment adoption.

## 4. Data Analysis and Results:

### 4.1 Consumer Demographics:

**Table 1: Demographics of Survey Respondents**

Demographic Category	Number of Respondents	Percentage (%)
Age Group: 18-25	75	25%
Age Group: 26-40	120	40%
Age Group: 41-60	80	27%
Age Group: 60+	25	8%
Gender: Male	180	60%
Gender: Female	120	40%
Monthly Income: ₹10,000-₹20,000	100	33.33%
Monthly Income: ₹20,000-₹50,000	150	50%
Monthly Income: ₹50,000+	50	16.67%

**Interpretation:** The data reveals that younger individuals (26-40 years) and individuals with a monthly income between ₹20,000-₹50,000 were the most likely to adopt digital payments. This demographic is more likely to have access to the internet and smartphones, making digital payments more feasible.

### 4.2 Adoption of Digital Payment Methods:

**Table 2: Popular Digital Payment Methods in Raipur (2017)**

Payment Method	Number of Users	Percentage (%)
UPI (Unified Payments Interface)	180	60%
Mobile Wallets (Paytm, PhonePe, etc.)	100	33.33%
Credit/Debit Card	15	5%
Cash	5	1.67%



**Interpretation:** UPI emerged as the dominant digital payment method, showing its appeal due to ease of use, security, and government support. Traditional methods like credit and debit cards were less popular, while cash payments were nearly obsolete in this sample by 2017.

#### 4.3 Changes in Consumer Behavior:

**Table 3: Changes in Consumer Behavior Post-Demonetization**

Behavior Change	Number of Respondents	Percentage (%)
Increase in Online Shopping	150	50%
Preference for Cashless Transactions	220	73.33%
Decrease in Frequency of Cash Payments	200	66.67%
Increase in Mobile Payment Usage in Stores	120	40%

**Interpretation:** The survey results show a significant shift towards cashless transactions, with half of the respondents reporting an increase in online shopping. This is consistent with the national trend of growing e-commerce and digital payment adoption.

#### 4.4 Factors Influencing Adoption of Digital Payments:

**Table 4: Key Factors Influencing Digital Payment Adoption**

Factor	Percentage of Respondents Agreeing (%)
Ease of Use	85%
Security and Privacy Concerns	72%
Government Incentives	60%
Availability of Internet	40%
Discounts and Cashback Offers	55%

**Interpretation:** Convenience, security, and government incentives were the most significant factors driving digital payment adoption. The study highlights the role of financial incentives, such as discounts and cashback, in motivating consumers.

#### 4.5 Business Owners' Perspective:

**Table 5: Impact of Digital Payments on Businesses**

Aspect of Business Impact	Percentage of Business Owners Agreeing (%)
Increased Customer Reach	65%
Reduced Cash Handling Costs	45%
Increase in Sales Volume	50%
Improved Customer Satisfaction	55%

**Interpretation:** Business owners noted a significant impact on customer reach and sales volume, largely due to the convenience of digital payments. Many businesses also reported reductions in cash handling costs, a major benefit for small and medium-sized enterprises.

#### 4.6 Regression Analysis Results:

**Table 6: Regression Analysis of Factors Influencing Digital Payment Adoption**

Variable	$\beta$ -Value	p-Value
Age	0.24	0.03
Income	0.33	0.01
Education Level	0.12	0.08

**Interpretation:** Regression analysis indicates that both income and age were significant predictors of digital payment adoption, with higher income and younger age correlating with greater likelihood of adoption.

### 5. Discussion:

#### 5.1 Key Findings

The study found that digital payment adoption in Raipur was driven primarily by the ease of use and security of platforms like UPI, as well as the government's push for a cashless economy. Younger consumers and those with higher incomes were more likely to use digital payment systems, while older consumers and those with lower incomes were slower to adopt.

#### 5.2 Implications

This research has significant implications for policy and business. The findings suggest that further investments in digital infrastructure, such as internet connectivity and mobile literacy

programs, are essential to encourage broader adoption. Additionally, businesses should embrace digital payments to cater to the growing demand from tech-savvy consumers.

## 6. Conclusion:

The transition to digital payment systems in Raipur, Chhattisgarh, following India's demonetization policy, highlights a fundamental shift in consumer behavior. The widespread adoption of digital platforms like UPI, mobile wallets, and online shopping reflects a growing acceptance of cashless transactions. This shift has been driven by several factors, including ease of use, government initiatives, and the desire for more secure financial transactions. As consumer behavior in Raipur moves towards digital payments, it is clear that businesses and policymakers need to adapt to this changing landscape.

From a business perspective, the shift to digital payments has opened new opportunities for expansion and customer engagement, but it also brings challenges in terms of technology infrastructure and consumer education. Retail businesses that have adopted digital payment systems have seen increased customer satisfaction, greater reach, and a reduction in cash handling costs. However, rural areas still lag behind urban centers in terms of digital payment adoption, signaling the need for more inclusive digital literacy programs and infrastructural support.

As India continues to move towards a digital economy, this research underscores the importance of supporting digital payment adoption not only in large cities but also in smaller towns like Raipur. The growth of digital payment systems offers a roadmap for improving financial inclusion and fostering economic development in less urbanized areas.

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