



## The Evolution and Impact of Online Payment Apps in India

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### Abstract

Mobile payment apps are also known as digital payment apps which are used for easy transactions and payments. These payment apps were introduced to customers for their benefits. There are various payment apps which are used for UPI payments like Google pay, Phone pe, pay tm, Bhim pay, Amazon pay etc. The online payment applications in India impact the importance of users' transactions daily. It focuses on the usage of UPI applications by users. The development of mobile payment apps which was examined by the overtime changing needs of customer's satisfaction. It mostly drives the factors like convenience, financial transactions and security by comparative analysis of digital transaction applications. The identification of the key features such as, weakness, strengths of each app by customer habits and preferences. It shows the steps taken by the RBI and the government to encourage a cashless society in the Indian economy. Customers' preferences for online payment methods are largely influenced by the current study's research of customer satisfaction. Simple random and sample methods were used to choose 100 respondents. Utilizing statistical tools such as ANOVA and LINEAR REGRESSION, these studies identified the online payment utilization of customers.

**Keywords:** Mobile payment apps; Regulatory frameworks; Security measures; Technological advancements work; User behavior

## 1. Introduction

### 1.1 Online payment apps

Now-a-days world is becoming digitalized in every field and one of the best examples of this is that various countries in the world are moving towards becoming a cashless society. A cashless society is the one which does not use cash for any of its transactions, instead all the transactions are done digitally. There are various countries in the world which have more than 50% of their transactions through cashless methods. According to a study conducted by Capgemini and BNP Paribas, digital payments are expected to reach about 726 billion transactions by the year 2020. In India 98% of the total transactions used to be done through cash but after the Demonetization of the Government on Nov 8 2016, our country has also started getting steered towards a cashless society [1]. Due to the Demonetization act already existing mobile payment applications came into the limelight like Paytm, Google pay, Phone Pe etc. The Digital India program is a flagship agenda of the Government of India with

a vision to transform India into a digitally empowered society and a knowledge economy. "Faceless, Paperless, Cashless is one of the professed roles of Digital India [2]. The Prime Minister of India Mr. Narendra Modi has empowered India to adopt cashless transactions by giving the digital payments sector of India a significant boost. The digital payment sector of India experienced an unpredicted growth since Demonetization in November 2016. Digital wallet companies in India have shown a growth of 271% for a total value of US\$2.8 Billion i.e Rs 191 crores [3]. A Google- BCG Report had estimated that the digital payment industry in India will experience a growth of US \$ 500 billion by 2020. The Government of India is also encouraging various digital payment apps such as Aadhaar Payment app, UPI App, Bharat Interface for Money (BHIM) app along with private sector apps like Paytm, Mobikwik, Free charge etc. Such new apps are beneficial to transfer funds across various parts of our country.



Digital payments industry in India is growing at a rapid pace providing a highly attractive platform for foreign investors to invest in India [4].

### 1.2 Purpose

The consumer behavior based on the usage of online payment apps. It analyzed the Importance, Benefits and safety of online payment apps among customers [5]. The issues faced by the customers towards online payment apps. It also focused on the customers adoption towards the online transaction facilities.

### 1.3 Objectives of the Study

1. To identify the customer adaptation for online payments over physical payments.
2. To assess customer satisfaction levels regarding online payment services.
3. To evaluate the impact of online payment apps on customer satisfaction.

## 2. Method

primary data is used, questionnaires are formed. The secondary data is used for reference. It is descriptive research [6]. The sample technique is done on the basis of simple random sample technique, With a sample size of 100 respondents [7].

### 2.1 Statistical Tools

Tools are used in Linear Regression table 1 and ANOVA. Analyzing the data is tabulated according to the respondent's table 2 responses using percentages, aggregated scores, which are essential for study, which helps in proper analysis of data and table 3 also graphs are used in the analysis for easy and quick interpretation table 4.

**Table 1 HO1 There is No Significant Difference in Customer Satisfaction Levels Between Users of Various Online Payment Services**

customers satisfaction	online payment services
54	15
39	25
5	60
1	1
1	1

## 2.2 Summary Output

**Table 2 Regression Statistics**

Regression Statistics	
Multiple R	0.019444
R Square	0.000378
Adjusted R Square	-0.33283
Standard Error	28.10874
Observations	5

**Table 3 Regulatory Frameworks**

	D f	SS	MS	F	Significance F
Regression	1	0.89651	0.89651	0.001135	0.975244
Residual	3	2370.303	790.1012		
Total	4	2371.2			
	Df	SS	MS	F	Significance F

**Table 4 Technological Advancements Work**

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%
Intercept	20.01851	16.91991	1.183133	0.321975	-33.8282	73.86522	-33.8282	73.86522
customers satisfaction	0.019075	0.566267	0.033685	0.975244	-1.78304	1.821188	-1.78304	1.821188

### 3. Results and Discussion

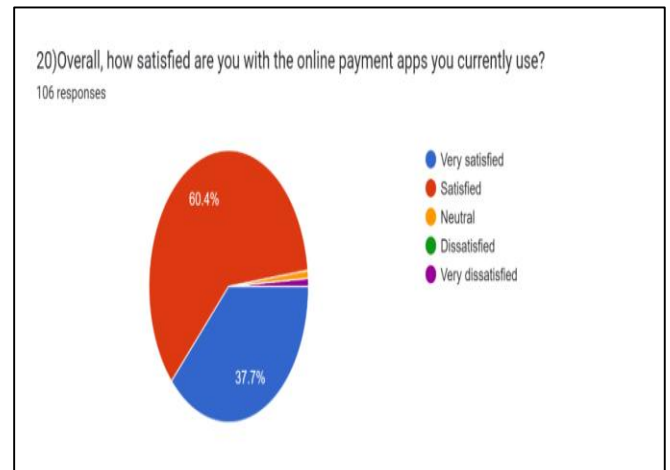
#### 3.1 Results

- To make digital services popular in rural areas, we need better infrastructure, customized services, and digital literacy promotion.
- India's tech contributions are viewed positively, showcasing confidence in its innovation, with no low ratings.
- Payment apps are popular for diverse transactions, indicating room for growth or improvement.
- Respondents overwhelmingly trust the security of e-payments which indicates the widespread confidence in digital payment systems.
- Cashback, discounts drive online payment adoption, while time-saving, expense tracking, and 24/7 availability boost preference for digital payments.
- Customer satisfaction is positively associated with online payment apps, indicating their potential importance.
- Online payment apps don't bring satisfaction to some of the employees.

#### 3.2 Discussion

The summary output represents a linear regression analysis between consumer satisfaction and online payments. The regression model is not significant ( $p < 0.05$ ), indicating that online payments are significant on consumer satisfaction, so reject  $H_0$  and accept  $H_1$  figure 2. The R value is 0.0003 implies that the variability is risk in online payments, over all

there is significant for online payments on customer satisfaction.



**Figure 2 Accept  $H_0$  and Reject  $H_1$**

#### Conclusion

The evolution of online payment apps in India has been a remarkable journey characterized by innovation, technological advancements, and widespread adoption. Beginning with the emergence of pioneering platforms like Paytm in the early 2010s, the landscape has witnessed a dramatic transformation with the introduction of the Unified Payments Interface (UPI) in 2016. This standardized and interoperable system revolutionized digital transactions, enabling seamless peer-to-peer payments directly from bank accounts. As a result, a plethora of online payment apps like Phone Pe, Google Pay, and others have emerged, offering a wide range of services and features to cater to the diverse needs of users.



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