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DIGITAL PAYMENTS IN RURAL INDIA: A CUSTOMER'S PERSPECTIVE

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Abstract: The emergence of digital payments services has played a crucial role in bridging the transactional gap between rural and urban areas. This research explores the growth and customer perception of digital payments in rural areas of India. The study investigates prevalent digital payment methods, their growth patterns, and individuals' attitudes and plans regarding cashless payment technologies. The objective is to identify measures that can enhance the cashless payment experience for rural users. The paper begins by discussing the transformation of India's payment landscape. Despite the acceptance of digital payments, concerns about security persist among rural populations. The research aims to bridge this gap by examining customer perception and the factors that influence satisfaction with digital payment services. The study proposes three hypotheses related to ease of use, benefits, and security, and analyses data collected through questionnaires distributed in the rural areas of the Washim district in Maharashtra. The research provides valuable insights into the growth and customer perception of digital banking services in rural India. The findings can serve as guidance for policymakers and financial institutions in implementing measures to simplify and improve the cashless payment experience for rural users, ultimately promoting financial inclusion and driving the adoption of digital banking payments in rural areas.

I Introduction

Digital banking eliminates the need for physical visits to banks and simplifies transactions by utilizing digital platforms. India witnessed a significant shift towards digital payments following de-monetization. The introduction of the Unified Payments Interface (UPI) in April 2016 further propelled the adoption of digital payments in the country. India's payment landscape has transformed, with a growing acceptance of digital transfers. The government's drive towards a cashless economy has fostered the development of innovative payment methods alongside traditional cash, debit, and credit cards. The Unified Payments Interface (UPI), introduced by the National Payments Corporation of India (NPCI), has gained immense popularity, boasting over 200 million users. UPI enables seamless fund transfers between bank accounts using mobile phones. Immediate Payment Service (IMPS) and National Electronic Funds Transfer (NEFT) allow real-time online money transfers, catering to the need for quick transactions.

Prepaid Payment Instruments (PPIs) such as mobile wallets, gift cards, and prepaid cards have gained prominence. These PPIs, including Paytm, PhonePe, Google Pay, and Amazon Pay, are widely accepted in both online and offline stores. They offer attractive features like cashback, discounts, and rewards, driving their popularity. Real-Time Gross Settlement (RTGS) facilitates instant electronic transfers of large sums, primarily utilized for high-value transactions by businesses. Aadhaar Enabled Payment System (AEPS) leverages biometric authentication, enabling individuals without smartphones or internet access to make payments using their account number and biometric information. The Bharat Bill Payment System (BBPS) serves as a centralized platform for online and in-person bill payments, covering utilities, school fees, and government services.

Service for Instant Pay Merchant Funds (IMPS-MP) is a mobile-based payment system that enables businesses to receive immediate payments from customers, bypassing the need for point-of-sale (POS) machines. The National Automated Clearing House (NACH) facilitates bulk and recurring payments such as loan repayments, pension disbursements, and credit transfers.

Despite the popularity of digital payments, concerns regarding security persist among rural populations. Addressing these concerns is essential. This study aims to examine the growth rate of digital payments in India and understand the motivations behind the adoption of cashless payment technologies. It also seeks to explore the diverse attitudes and plans of individuals towards digital payments. Ultimately, the study aims to identify measures to simplify and enhance the cashless payment experience for all users.

II Objective of study

1. To evaluate the various Digital payments modes prevalent in India
2. To investigate the growth pattern of various digital payment methods in India
3. To assess rural customer perception towards the digital payments

III Literature review

Digital payments and customer perception have attracted global research interest. Gupta, Sunny, and Dinesh Kumar (2020) studied the innovativeness of UPI and its perception among consumers, finding that demographic profiles, except for education, do not influence UPI utilization. The widespread availability of the internet and smartphones has facilitated the adoption of UPI payments. Deepa and Lalitha V.'s (2020) study aimed to understand India's cashless economy. Despite the government's demonetization efforts, India lags behind similar nations in digital economy development. Therefore, further promotion of digital payments is necessary to increase usage among the general population.

Kails, K. Saravan's (2020) research highlighted factors and benefits related to the cashless economy. Hasan et al.'s (2012) study revealed that the transition to electronic retail payments stimulates economic expansion, consumption, and trade in Europe. In India, initiatives like Paytm and Point-of-Sale facilities were introduced, with the government actively promoting digital payments. A survey mentioned in India: Digital Payments Awareness by Type (2022) showed that 94% of respondents were aware of using cards for digital payments, while 24% knew about immediate payment services (IMPS). The RBI-DPI Index continues to demonstrate significant growth in digital payments adoption and deepening across the country, as reported in RBI Press Release: 2021-2022/1568. Despite progress, challenges persist in the digital payment system. Malusare's (2021) study categorized the main problems into social, economic, technical, knowledge, and legal aspects, aiding the development of effective digital payment strategies. Rastogi (2020) examined the growth and causes/limitations of digital payments in India, while ANGAMUTHU (2020) analysed growth differences across payment categories. Rajat's (2020) research discussed various digital payment systems in India and their increasing prevalence.

Both cash and non-cash payment methods fulfil different needs, and India still lags in the digital economy compared to similar nations. Basic infrastructure, electricity, connectivity, and education are needed, especially in rural areas, to foster the adoption of the cashless economy. Bailey et al. (2019) studied customer perception, particularly among millennials, of mobile payment services in the United States, finding a slow adaptation to mobile payment methods despite technological advancements in the traditional banking system. This study addresses the research gap by investigating the growth patterns of digital payment methods in India and assessing rural customer perception of digital banking services.

IV Methodology

Primary as well as secondary data collection was carried out, this study examines the aggregate surge in digital payments in India during the five fiscal years from 2017-18 to 2021-22, as well as the growth of selected payment categories. Also, study investigated four factors which are easy to use, consumers' perception, benefits, and security. Data collected data by circulating questionnaires to people in the rural parts of the Washim district of Maharashtra.

V Hypothesis

H1- Customers' perceptions are positively influenced by the ease of use of digital banking services.
H2- The benefits of digital banking services are positively influenced by customers' perceptions
H3- The benefits of digital banking services are positively influenced by their security.

VI Data Analysis

For year-on-year basis, Table 1 indicates that there is a gradually increasing trend of digital payments in India both in terms of volume and value of transactions. On an average, 4992 crore volume of transactions (CV 48%) brings the digital payment. Value to INR 2649 (CV 15%) per year across the study period. The Compound Growth Rate for the study period 2017-2018 to 2021-22 indicates volume growth rate of transactions at 34% and value growth rate of transactions at 9% of the country's digital payment system.

Table- 1 Overall Growth of Digital Payments In India

	Digital Payments in India	
Financial Year (FY)	Volume of Transactions (in Crore)	Value of Transactions (in Lakh Crore)
2017-18	2071	1962
2018-19	3134	2482
2019-20	4572	2953
2020-21	5554	3000
2021-22	8840	3021
Mean	4292	2649
CV (%)	48%	15%
CAGR%	34%	9%

Source: RBI and NPCI

6.1 Growth of Digital Payments across categories

Table 2 shows the average growth in volume and value of digital payment transactions across the categories for the reference period 2017-18 to 2021-2022.

Table- 2 Growth of Digital Payments Across Categories

Categories	Volume (in Lakh)		Value (in Crore)	
	Mean	CAGR	Mean	CAGR
RTGS	1,557	11%	12,35,63,028	2%
AePS	10	11%	654	27%
APBS	14,298	-1%	97,226	19%
IMPS	26,565	36%	23,86,459	36%
NACH Cr	12,531	22%	9,60,706	20%
NEFT	28,287	16%	2,33,63,608	11%
UPI	1,74,224	119%	31,27,707	138%
Credit Cards	18,698	10%	6,19,055	8%
Debit Cards	41,670	3%	6,49,883	10%
Prepaid Payment Instrument	49,907	14%	2,12,503	16%

Source: Author's analysis from RBI and NPCI Data

Table 2 explains that the maximum contribution on average growth performance of digital payments in terms of volume of transactions take place by the way of UPI, PPI, and Debit Cards whereas maximum contribution on the average growth performance of digital payments takes place by the way of UPI and IMPS. Over the past five years, both volume and value of digital payment transactions have grown multi-fold. Therefore, the CGR across the categories of digital payments for the period 2017-18 to 2021-22 indicates growth in the country, both in terms of volume and value of digital payment transactions. Among various categories of digital payments, both UPI and IMPS services have the highest growth rate as compared to other categories of digital payments in terms of both the aspects.

6.2 Demographic details

Table- 3 Demographic Details of Respondents

Demographic Variable		Number	Percentage
Gender	Male	55	79%
	Female	15	21%
Age	Upto 24 year	35	50%
	25 to 34 years	24	34%
	35-44 year	7	10%
	45 and above	4	6%
Education	Illiterate	2	3%
	High school	8	11%
	Bachelor	31	44%
	Masters	29	41%

6.3 Reliability test

Based on the reliability test conducted in Excel, results are as follows,

Table- 4 Reliability Test

Item/Questions/components	17
Sum of item variances	22.08
Variance of total scores	182.90
Cronbach's Alpha	0.93

Cronbach's alpha coefficient, which is 0.934211, is a measure of the internal consistency of the items or questions/components in the measure. This indicates that the measure has high internal consistency, suggesting that the items or questions/components are measuring the same construct.

6.4 Factors Affecting Satisfaction of Digital Payment

Here's a simple table that shows how each of the study's factors affects the satisfaction of customers who use digital banking services in rural areas, based on the mean and standard deviations.

Table- 5 Factors Affecting Satisfaction of Digital Payment

Factors	Benefit	Easy to use	Security	Customer perception
N	70	70	70	70
M	4.24	4.01	3.76	3.98
SD	3.92	3.69	3.50	3.68

Table 5 presents the factors influencing satisfaction with digital payment services. Among these factors, Benefit has the highest mean score of 4.24, indicating customers perceive significant advantages. However, the standard deviation of 3.92 suggests variability in this perception. The Easy-to-use factor has a mean score of 4.01, showing that customers generally find the services user-friendly. Yet, the standard deviation of 3.69 suggests some variability in ease of use. Regarding Security, the mean score of 3.76 indicates customers perceive lower levels of security. The standard deviation of 3.50 suggests variability in this perception. The Customer perception factor, with a mean score of 3.98, shows an overall positive perception of digital payment services. However, the standard deviation of 3.68 indicates individual differences in perception. Overall, customers perceive significant benefits and find digital payment services easy to use, although there are variations. Security perception is relatively lower, but overall customer perception remains positive with individual differences.

6.5 Relationship Existing Between Ease to Use and Customers' Perception of Digital Banking services.

To determine the basic relationship that has to do with the ease of use of the digital banking services with every customer's perception.

H1: Customers' perceptions are positively influenced by the ease to use of digital banking services.

Table- 6 Pearson Correlation Between Ease To Use And Customers Perception.

	Ease of use	Customer perception
Ease of use	1	
Customer perspective	0.845917315	1

The table shows that there is a strong positive correlation between "Ease of use" and "Customer perspective", as indicated by the coefficient of 0.845917315. This suggests that customers perceive the product or service to be easier to use when their perspective is considered. Overall, this suggests that paying attention to the needs and preferences of customers can result in a better user experience and higher customer satisfaction.

6.6 Relationship Existing Between the Perception of Customers and the Benefits of the Digital Banking services.

Perception of customers and the benefits of the Digital Banking services is analysed and thus results can be seen in Table. 7

H2: The benefits of digital banking services are positively influenced by customers' perceptions.

Table- 7 Pearson Correlation Between Customers Perception and Benefits

	Customer perspective	Benefit
Customer perspective	1	
Benefit	0.880274091	1

The value 0.880274091 in the "Benefit" row means that there is a strong positive correlation between "Customer perspective" and "Benefit". This suggests that customers who perceive a product or service favourably are more likely to see the benefits of using it.

6.7 Relationship Existing Between the Security and the Benefits of the Digital Banking services.

H3: The benefits of digital banking services are positively influenced by security factor.

Table- 8 Pearson Correlation Between Benefits and Security

	Benefit	Security
Benefit	1	
Security	0.664742962	1

This result suggests a high correlation between the "Benefit" and "Security" factors, as both have a value of 1 on their diagonal cells, indicating a perfect correlation with themselves. However, the correlation coefficient between these two factors is 0.664742962, which suggests a moderately positive relationship between the two. This means that the level of perceived security associated with a product or service is positively associated with the level of perceived benefit it provides to the user. In other words, the more secure a product or service is perceived to be, the more benefits it is likely to provide to the user.

Based on the given table and interpretation, it can be concluded that paying attention to customer needs and preferences can lead to a better user experience, higher customer satisfaction, and greater perceived benefits of using a product or service. Additionally, perceived security is positively associated with perceived benefits, suggesting that a higher level of perceived security can enhance the perceived benefits of a product or service.

VII Conclusion

India's digital payment system has shown a steady growth trend over the past five years. The volume and value of transactions have gradually increased, with an average annual transaction volume of 4992 crore and a value of INR 2649. The Compound Growth Rate (CGR) indicates a volume growth rate of 34% and a value growth rate of 9% during the study period. UPI, PPI, and Debit Cards have contributed significantly to the volume growth, while UPI and IMPS have contributed the most to the average growth performance of digital payments. This highlights the role of UPI and IMPS in driving the growth of India's digital payment system.

Regarding customer satisfaction factors, responses showed diverse perceptions. Customers were generally more satisfied with the benefits received from digital payment services, indicating perceived value in terms of convenience, time savings, and cost savings. The ease-of-use factor had a slightly lower mean and standard deviation, suggesting relative ease of use with less variability. Security was also perceived positively, but with some variability in experiences. Providers should prioritize security while striving to improve customers' overall experiences. Customer perception had the lowest mean and high standard deviation, indicating varied perceptions. Providers should focus on delivering benefits, ease of use, and security to enhance customer satisfaction and address negative perceptions.

VIII Recommendation

Providers should focus on delivering strong benefits to customers, as the study suggests that customers perceive significant value from using digital payment services. This could include emphasizing the convenience, time savings, and cost savings of using digital payment services.

Further, providers should continue to prioritize the ease of use and security of their services. While customers generally find digital payment services to be relatively easy to use and secure, there is still room for improvement. Providers should work to simplify their services and ensure that they are user-friendly, while also implementing robust security measures to protect customers' sensitive information. Finally, providers should be aware of the variability in customer perceptions of digital payment services. While some customers may have positive experiences, others may have negative experiences that lead to a negative perception of the service. Providers should strive to improve their customers' overall experiences with their services to address any negative perceptions and improve customer satisfaction. These recommendations are important for policymakers and businesses looking to understand the digital payment landscape in India and identify opportunities for growth and investment.

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