



Digital Payment System Obstacles: A Study on Perspectives of Retailers and Consumers of Maharashtra

Research Scholer Jigar K. Joshi¹,

Associate Professor Dr. Pushpkant Shakdwipee²

Department of Management, Pacific Academy of Higher Education and Research University,
Udaipur¹

Department of Management, PAHER University, Udaipur²

Abstract. An in-depth analysis of digital payment awareness along with customer views in Maharashtra, India is presented in the study report. It is now crucial to comprehend the dynamics of customer behavior towards electronic payment methods due to the fast development of digital technology and the rising frequency of cashless transactions. The purpose of this research is to better understand how customers in Maharashtra feel about and use different types of digital payment systems, as well as the present state of digital payment usage within this demographic. Recent legislative efforts and technology advancements have put India's digital payment system in a strong position to become a success story. Meanwhile, there is evidence that cash is being used more often in the statistics. Despite the fact that national statistics can provide a picture of people's tastes in general, we use a unique survey dataset to learn how customers' "perception," "trust," and "experience" with online fraud influence their payment habits. A person's perception of digital payment instruments and her trust in the entire transactions framework while banking system significantly impact their usage of these methods. Important demographic factors such as age, gender, and income also play a role in this decision-making process. According to our findings, the extent to which prior encounters with online fraud discourage the use of digital payment methods differs depending on the nature of the transaction. The research aims to uncover the intricate web of factors influencing customer views and actions regarding digital payments by employing a multifaceted analytical strategy that incorporates socioeconomic factors, technological infrastructure evaluations, regulatory landscapes, while cultural intricacies. The research aims to uncover both the prospects for development and improvement in the digital payment system and the significant barriers preventing the broad acceptance of digital payments via careful data collecting, rigorous analysis, and intelligent interpretation. In addition to adding to what is already known about digital payments, this study's results provide policymakers, companies, and other stakeholders with useful information and suggestions for how to increase consumers' familiarity with and comfort with these methods in Maharashtra.

Index Terms- Digital payments, Consumer awareness, Consumer perceptions, Maharashtra, Adoption factors, Sociodemographic, Technological infrastructure, Regulatory environment, Cultural factors, Challenges, Opportunities, Strategies.



I. Introduction

The introduction of electronic payment methods has completely altered the global landscape of money transfers. There has been a dramatic increase in the usage of digital payment methods in the Indian state of Maharashtra, which is a major economic hub [1]. The expansion of digital payment systems in the state may be attributed to several factors, including the widespread availability of smartphones, better internet access, and efforts by the government such as Digital India. Nevertheless, there is still a lack of clarity about the complex dynamics of customer behavior when it comes to digital payments, even with all these improvements. Understanding how people in Maharashtra feel and what they know about digital payments is crucial. First and foremost, it is an important barometer of the populace's preparedness to accept digital monetary solutions [2]. Consumer behaviour data may show lawmakers how well current programs are doing and help them craft more precise actions to close knowledge and adoption gaps. Secondly, in order to meet the demands of Maharashtra's varied customer base, financial institutions and enterprises must have a thorough awareness of customer preferences and concerns in relation to digital payment systems. Additionally, wider national goals like financial inclusion as well as the shift away from a cash-dependent economy are compatible with encouraging the growth of digital payment methods. Electronic payment systems have the potential to boost economic development, increase transparency, and decrease the likelihood of illegal financial activity by replacing cash. Financial inclusion, economic growth, and the realization of a digitally empowered society may be greatly advanced by better comprehending consumer attitudes towards digital payments in Maharashtra. Two main goals are intended to be accomplished by this study [3], [4].

As a first step, it hopes to gauge how well-informed Maharashtra residents are about digital payment methods. Checking their level of expertise with different digital payment systems, knowing the pros and cons of digital transactions, and being aware of government programs that encourage cashless purchases are all part of this [5], [6]. The purpose of this research is to learn how people feel about and use digital payment systems. Some of the aspects that need to be considered are people's faith in digital payment systems, their impressions of how easy they are to use, their worries about privacy and security, and their preferred ways of payment [7]. The study's overarching goal is to learn what motivates and discourages people in Maharashtra to use digital payment methods by investigating these factors. In doing so, the study hopes to contribute to the larger aims of financial inclusion while economic development by offering useful insights and suggestions for lawmakers, financial institutions, and companies on how to increase consumer awareness and acceptance of electronic payment methods in Maharashtra [8].

II. Literature Review

With its wide variety of electronic systems for safe and efficient cash transfers, digital payment systems have revolutionized the way money is sent. Mobile wallets, online banking, contactless payments, & P2P transfer services like UPI are all part of these systems. With varied degrees of accessibility, security, and convenience, each of these systems serves a unique set of requirements and preferences [9], [10]. In order to understand the changing financial transaction environment and consumer



preferences in Maharashtra, it is essential to understand the complexities of these electronic payment systems. Important topics covered in the analysis include how consumers feel about digital payment methods, how widespread mobile banking is, how growth in digital payments varies between regions, and how digital payment systems may help ensure economic sustainability. To encourage the broad use of electronic financial services as well as to economic growth, it is vital for policymakers, financial services providers, and enterprises to understand these perspectives and considerations. Individuals' attitudes and behaviors towards digital payment systems are shaped by consumer perceptions, which are crucial to their uptake and use. Numerous elements, including internal and extrinsic motivators, impact customer views. Adoption intentions are greatly influenced by the perceived usefulness, which is based on the perceived advantages and usability of digital payments [11], [12]. The believed simplicity and friendliness of online payment services affect customers' propensity to interact with these systems, which in turn effects the perceived ease of use. Furthermore, customer views and adoption behavior are greatly influenced by faith in the dependability and security of digital payment suppliers, as well as worries about data privacy while transaction security. Peer recommendations and cultural standards contribute to social influence, which in turn affects consumer perceptions along with adoption choices. Consumers in Maharashtra are influenced by factors including cultural norms and technical competency when it comes to adopting and using digital payment methods [13]. There is a wealth of research on consumer behavior and views regarding digital payments, based on observational studies from all over the world and all kinds of demographics. A number of factors related to digital payment adoption have been investigated in this research. These include familiarity with the concept, frequency of use, degree of satisfaction, and the effect of demographic factors like income, education, and age on the likelihood of adoption. How security features, user interface design, and instructional efforts affect customer perceptions and adoption behavior has also been the subject of study. The purpose of this literature review is to fill in the gaps in our understanding of consumers' digital payment awareness while views in Maharashtra by combining the results of prior research [14].

III. Methodology

1. Design

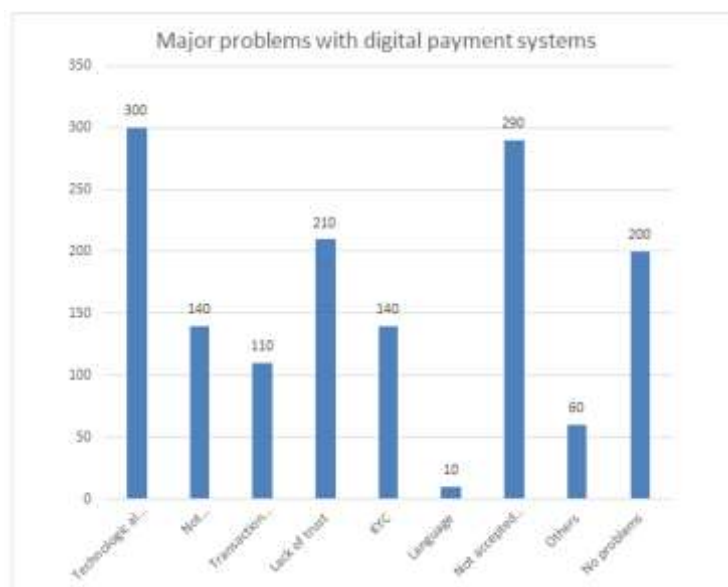
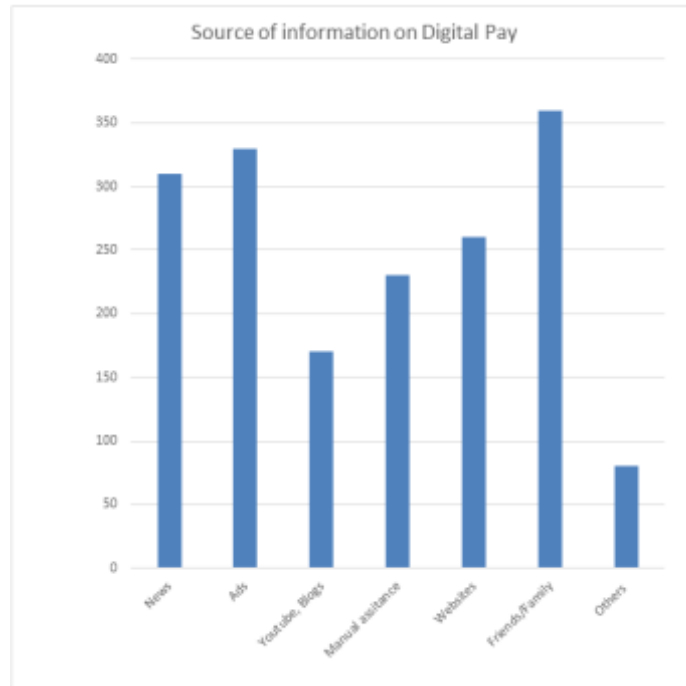
To explore the many facets of digital payment knowledge and views among customers in Maharashtra, this research employs a rigorous and methodical methodology. A mixed-methods approach is used to guarantee a thorough examination of the topic matter, acknowledging the complexity of the study's aims. Use of quantitative surveys, qualitative interviews, and focus groups is part of a sequential explanatory design. The results are more thorough and reliable because of the triangulation of information obtained from several sources, which is made possible by this sequential method.

2. Sampling

To guarantee that the research sample is diverse and reflective of Maharashtra's many demographic and socioeconomic groups, the sampling approach is carefully crafted. To begin, areas or districts within the state which are unique in



urbanization, income, and cultural variety are chosen using purposive sampling. To ensure a diversified cross-section of the population, random sampling methods like stratified or clustered sampling are used to choose houses or people within each designated area. In order to reach statistical significance while still being feasible, the sample size is selected using proper statistical procedures.





3. Data Collection

The data is meticulously gathered using both primary and secondary sources, with a focus on detail. A sample of customers in Maharashtra is surveyed using standardized questionnaires to get primary data. Digital payment awareness, views, use habits, and socio-demographic traits are among the many variables captured by the rigorously built survey instrument. In addition, a subgroup of participants undergoes semi-structured focus group discussions and interviews to get qualitative data. This helps to shed light on the true reasons for, perspectives on, and experiences with digital payments. The original data is supplemented by secondary data sources that provide background information and context at the same time. Information about digital payment acceptance and consumer behavior in Maharashtra may be found in secondary sources such as reports, government publications, statistics databases, and existing literature. Utilizing a combination of primary and secondary sources of data strengthens the study's analytical framework and increases confidence in its results.

4. Analysis

In order to achieve the goals of the research, data is analyzed utilizing a rigorous and iterative procedure. Rigid statistical analysis is performed on quantitative survey data using methods including correlation analysis, regression analysis, inferential statistics, and descriptive statistics. By using these statistical tools, one may look for trends and patterns in the data, as well as discover important predictors and investigate correlations between variables. To systematically code and classify qualitative information into themes and patterns, thematic analysis is used to data gathered from focus groups and interviews. In order to provide more context and depth to the quantitative results, this qualitative analysis method enables the discovery of recurring motifs, subtle insights, and detailed narratives.

5. Methods

To get a complete picture of Maharashtra consumers' digital payment knowledge and attitudes, researchers used quantitative and qualitative methods of data analysis. The report provides policymakers, financial institutions, as well as other stakeholders with detailed insights and practical suggestions to improve digital payment uptake and financial inclusion in the state by triangulating information from different sources.

Materials

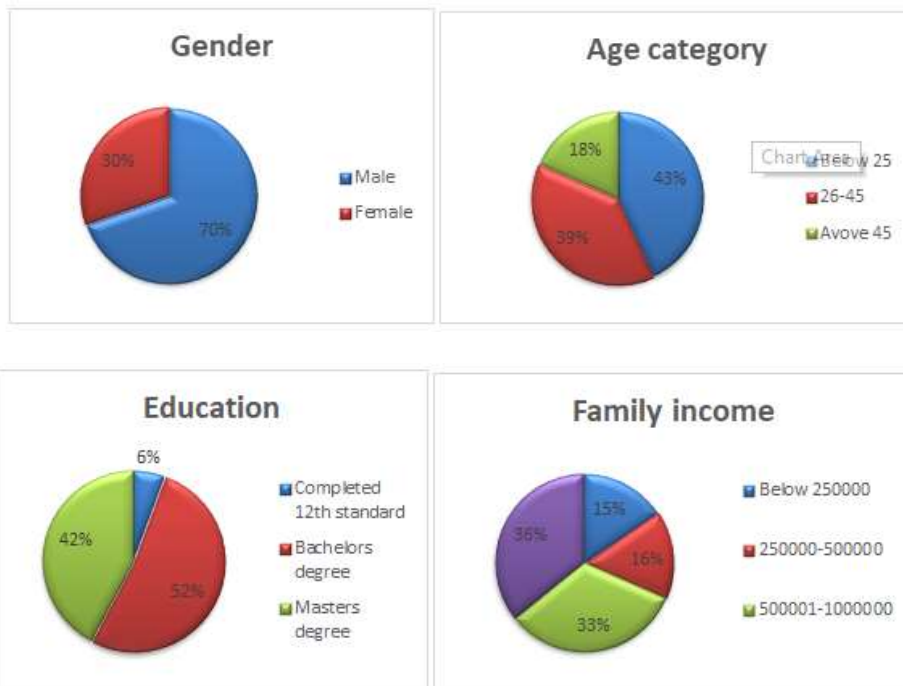
There are four factors that are taken into account when comparing digital versus cash payments: ease, affordability, safety, and privacy/anonymity. It has been noted that digital payments often outperform cash on all four counts. There are four factors that make up people's level of confidence in electronic payment systems: their personal bank, the central bank, other players (such as payment aggregators), and banks (both their preferred and actual banks for depositing money). People seemed to have higher faith in the RBI and financial institutions than in other service providers. Digital payments have a number of problems, the most significant of which being technical difficulties, poor acceptability, and distrust. Based on the severity of the scam's possible effect, victims of internet fraud fall into one of four categories. A total of 532 people out of 630 who took the survey had fallen victim to internet fraud.

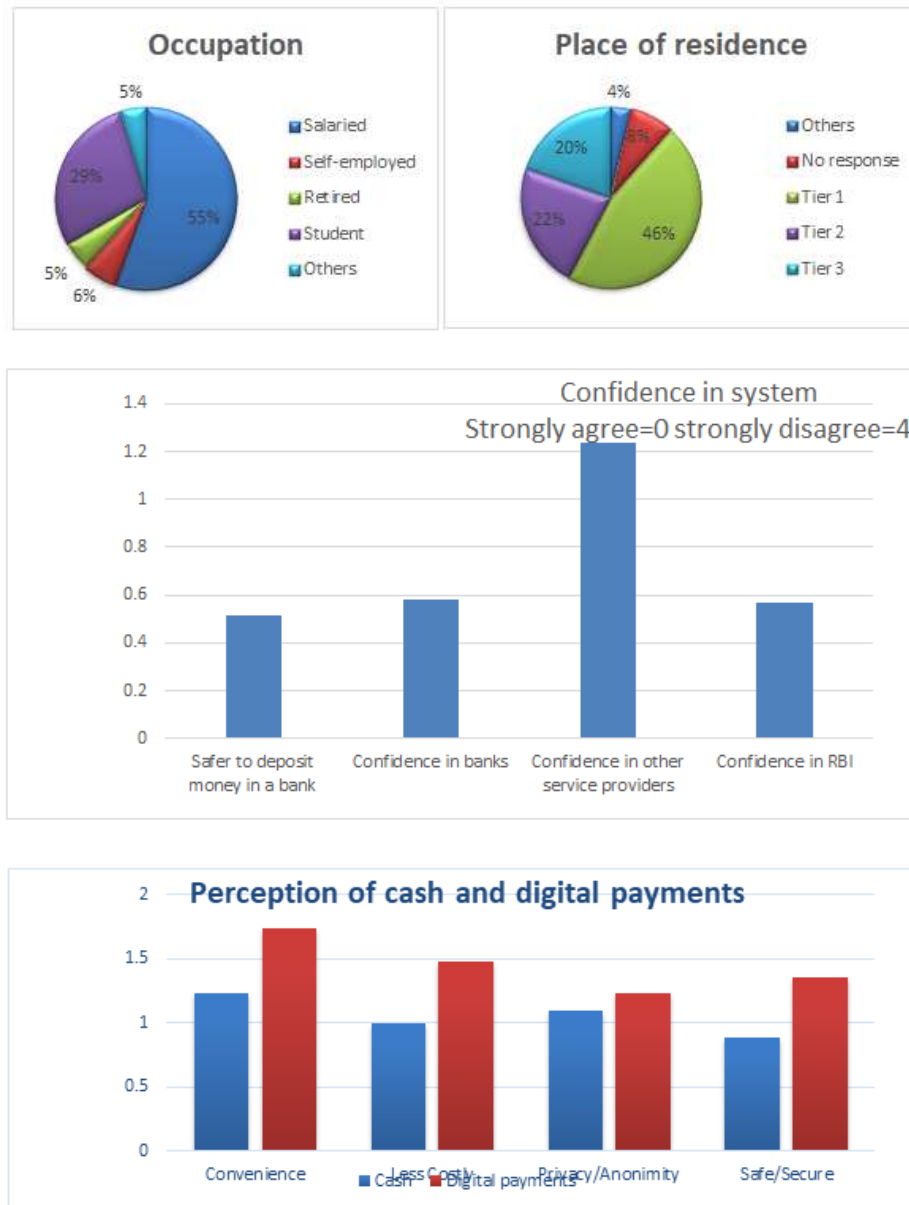


Table 1 Demographic variables

Variables	Category-1 (baseline)	Category's	Category-3	Category-4	Category-5
Gender	Female	Male	Transgender		
Age	≤ 25	26-45	>45		
Education	Completed 12th standard	Bachelor's degree	Master's degree		
Family income	<2.5 lakhs	2,50,000- 5,00,000	5,00,001- 10,00,000	10,00,001- 25,00,000	>25 lakhs
Occupation	Salaried	Self- employed	Retired	Student	Others
Place of residence	Tier-3 (z)	Tier-1 (x)	Tier-2 (y)		

Only 26 people out of 411 who were directly affected by the event said they had gone cashless or used digital payment methods less often; the majority (279 people) said there had been no alteration in the way they paid. In addition, we wanted to know if, after seeing the scam firsthand, respondents reported it to the appropriate authorities. When asked if they had suffered any losses, the majority of respondents said no.





2. Trust in Payment System

In addition to how they felt about specific payment methods, we asked them to rate their overall level of trust in the payment systems using four other criteria. The trust in the payment system may be measured using a five-point Likert scale. A score of '0' or 'strongly agree' indicates great confidence, while '4' denotes significant lack of confidence. An average of the scores received on every variable is used to get the overall score. Table 5 shows that customers' propensity to pay digitally declines as their confidence in online payment platforms declines or as their 'lack of trust' score



risers. Feedback on electronic payment methods was also requested of respondents at the conclusion of the poll. This tells us how customers feel about digital payments in general and what they are most worried about. Chart 2, a "wordcloud" composed of the 50 most common terms in the comments, shows that customers are generally favorable about technological innovations and like the "convenience" that digital payment options provide.

Table 2 Trust in the payment system (Reference alternative = cash)

	Grocery	Utilities	Durables	Online shopping	Gold
Lack of trust (Cash)	0	0	0	0	0
Lack of trust (DP)	-1.104*** (0.279)	-0.568** (0.240)	-1.182*** (0.262)	-1.101*** (0.294)	-0.741*** (0.225)
Lack of trust (Both Cash and DP)	-0.462** (0.191)	-0.165 (0.255)	-0.434* (0.246)	-0.593** (0.286)	-0.424** (0.207)
Observation	531	529	501	527	448
R2	0.156	0.107	0.157	0.160	0.094
Log Likelihood	-433.684	-425.970	-396.993	-397.368	-431.058
LR Test (df = 34)	159.771**	102.351***	147.846***	150.876***	89.540***

Perception of Cash vs. Digital Payments

There are four factors that contribute to how people see cash: the ease of payment, the cost of payment, worries about privacy or anonymity, and the security of the payment. From 0 (poor) to 2 (excellent), the scores are shown. An average of the four parameters is used to get the overall score. Integrated to the baseline framework is the total score, a continuous variable. The log odds are used to report the resulting coefficient. The respondent's view of cash strongly influences their choice of payment method (Table 3). There will be a general decline in the use of digital payment methods as the perceived value of cash rises. Given that all transactions are conducted with cash, there is no correlation between how people perceive currency and the reference option for payment. The chance of making low-value grocery store and online payments lowers the greatest when perception improves, but the likelihood of making high-value payments for durable goods and gold falls to the lowest.



Table 3 Perception of cash Reference alternative (Cash)

	Grocery	Utilities	Durables	Online shopping	Gold
Perception of cash (Cash)	0	0	0	0	0
Perception of cash (DP)	-1.663*** (0.364)	-1.141*** (0.341)	-1.359*** (0.397)	-2.150*** (0.465)	-0.907*** (0.314)
Perception of cash (Both cash and DP)	-0.926*** (0.285)	-0.356 (0.359)	-0.762* (0.390)	-1.281*** (0.456)	-0.546* (0.300)
Observations	525	522	497	520	451
R2	0.168	0.123	0.140	0.167	0.090
Log Likelihood	-422.114	-408.150	-399.130	-384.794	-435.351
LR Test (df = 34)	170.334***	114.290**	130.397***	154.060***	85,768***

Table 4 Perception of digital payments

Reference alternative (Cash)					
	Grocery	Utilities	Durables	Online shopping	Gold
Perception of DP (Cash)	0	0	0	0	0



Perception of DP (DP)	2.600*** (0.437)	1.321*** (0.370)	1.099 ** (0.429)	1.665 ** * (0.494)	0.757** (0.342)
Perception of DP (Both cash and DP)	1.167*** (0.315)	0.729* (0.400)	0.737 * (0.433)	1.159** (0.497)	0.307 (0.331)
Observations	532	528	499	526	454
R2	0.186	0.115	0.129	0.142	0.085
Log Likelihood	-418.490	-416.908	-405.154	-400.593	-440.790
LR Test (df=34)	191.235***	108.487***	120.389 ***	132.798***	81.532***

The overall score for digital payment perception is also taken into account, which is computed in a manner similar to that of cash mentioned before. Table 3 shows favorable and statistically significant coefficients, suggesting that the chance of paying digitally increases as perception improves. The use of simply cash is likewise the reference alternative in this case. Perception factors seem to have the greatest impact on food expenditures and the least on gold expenditures, at least in terms of size. It follows that the responder is more likely to pay digitally if they have a good attitude about digital payment methods. There is still a long way to go before digital payments can compete with the anonymity, ease, and low cost of using cash. The data also show that impression of payment methods has less of an impact on high-value payments (gold along with durables) than low-value payments (grocery).

IV. Conclusion

Ultimately, this research delves deep into the digital payment scene in Maharashtra, uncovering a constantly shifting web of possibilities and threats. The study delves into the intricacies of the elements influencing digital payment acceptance and consumer behavior in the area, including demographics, infrastructure, regulations, and culture. There is a lot of room for development and innovation in Maharashtra's digital payment ecosystem, despite obstacles including tech limits, security worries, and cultural preferences. The study's value is in the market possibilities and improvement initiatives it identifies, providing stakeholders with practical advice to increase the use of digital payments and boost financial



inclusion in the state. There are a number of suggestions, such as making digital infrastructure more secure, increasing financial literacy, creating solutions that are sensitive to other cultures, and simplifying rules. Maharashtra has the potential to lead the way in digital payment acceptance by putting these suggestions into action and encouraging cooperation and innovation. This would lead to economic development, financial inclusion, and social improvement in the digital age.

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