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IMPACT OF DIGITAL PAYMENT SYSTEMS ON CUSTOMER SATISFACTION IN THE BANKING INDUSTRY: A STUDY

Ashok Verma [1], Rohan Agrawal [1]

[1] Assistant Professor (Commerce), Govt Gna Pg College Bhatapara, Balodabazar-Bhatapara (C.G.)

Corresponding Author

Rohan Agrawal,
Rohanagrawal7@gmail.com

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ABSTRACT

The main objective of this study is to analyze the use of digital payment systems in the banking industry and its consequent impact on customer satisfaction. Digital payment systems have made financial transactions faster, safer, and convenient, thereby improving the consumer experience. This study examines these digital services' reliability, simplicity, security, and timeliness from the customer's perspective. The study focuses on customer satisfaction with various digital payment platforms, such as net banking, mobile wallets, UPI, and credit/debit cards. It was observed that the use of digital payment systems has not only improved customer experience but also increased the efficiency of the banking process. It is concluded through this study that consumers are more loyal to banks that provide state-of-the-art digital services. Moreover, strengthening the security and privacy aspects has been shown to increase customer satisfaction positively. The findings of this research will provide direction for banks to improve their digital services to meet customer needs better.

Keywords: Digital Payment System, Customer Satisfaction, Banking Industry, Financial Transactions, Security and Privacy

1. INTRODUCTION

In today's digital era, the banking industry is undergoing rapid changes, with the use of technology playing a vital role in making banking processes simpler, faster and efficient. Digital payment systems, which include internet banking, mobile banking, UPI (Unified Payments Interface), mobile wallets, credit/debit cards, etc., have made financial transactions extremely simple for customers. The proliferation of these systems has not only become convenient for consumers but has also challenged the traditional banking system. The objective of this study is to analyze the impact of the use of digital payment systems on customer satisfaction and how these systems improve customer experience.In this era of competition in the banking industry, customer satisfaction has become an important factor to attract and retain customers. The increasing use of digital payment systems has given new dimensions to the banking experience of customers, increasing simplicity and security in their financial transactions. Through digital payment systems, customers can now stay connected with banks and do not need to visit branches for their banking work. Thus, digital banking has made the lifestyle of customers easier by making banking services available from anywhere and anytime.

2. GROWING POPULARITY OF DIGITAL PAYMENT SYSTEMS

The growth of digital payment systems in India has also been encouraged by the collaboration of the government and the Reserve Bank of India (RBI). Keeping in mind the Digital India initiative and the goal of a cashless economy, the government has promoted several digital payment options. UPI, which has emerged as a revolutionary system, has connected millions of people to the digital payment system. Mobile wallets, such as Paytm, PhonePe, and Google Pay, have also become increasingly popular among customers. These systems have widened the reach of banking services, allowing people in both urban and rural areas to avail it effortlessly.

3. FACTORS OF CUSTOMER SATISFACTION

There are several important factors affecting customer satisfaction, including convenience, security, speed, privacy, and cost. Digital payment systems have increased customer satisfaction by improving these factors.

1) Convenience:

Customers no longer need to stand in queues at bank branches for their financial transactions. Through digital payment systems they can do all their banking work from home or anywhere. This convenience attracts customers to banking services and increases their satisfaction.

2) Security:

Although digital payment systems face security challenges, banks have taken several steps to ensure customer privacy and security of transactions. Various authentication methods, such as OTP (One Time Password) and biometric authentication, are proving to help make digital transactions secure. When customers feel that their financial data is safe, their satisfaction increases.

3) Speed:

Transactions are faster with the use of digital payment systems, which provides instant service to customers. This faster speed not only saves customers' time but also meets their expectations, making them more satisfied.

4) Privacy:

Privacy is an important factor in banking transactions. Data security and protection of customer's personal information is ensured in digital payment systems. When customers are confident that their personal information is safe, it further increases their satisfaction level.

5) Cost:

Digital payment systems have also reduced the cost of banking transactions. Through this, many services are available free of cost or at minimal charges, which helps customers avoid additional charges and increases their satisfaction.

4. SIGNIFICANCE OF RESEARCH

The significance of this study lies in the fact that it helps to clearly understand the development of digital payment systems in the banking industry and its impact on customers. Through this research, banks will get an opportunity to understand how digital services affect their customer satisfaction and how they can further improve their services. Along with this, this study also evaluates the quality of banking services from the customers' point of view, which will help banks to understand the expectations and requirements of customers.

5. OBJECTIVES OF THE STUDY

1) To analyse the impact of the use of digital payment systems in the banking industry on customer satisfaction.
2) To evaluate various factors of customer satisfaction based on the security, reliability, and simplicity of digital payment systems.
3) To study the changes in customer loyalty and experience due to the use of digital payment services.

Hypothesis 1:

H0: Usability of digital payment system has no significant impact on customer satisfaction.

Hypothesis 2:

H0: The security of the digital payment system has no significant impact on customer satisfaction.

6. NEED FOR THE STUDY

1) Assessment of the Impact of Digital Payment Systems:

Digital payment systems are rapidly spreading in the banking industry, but a comprehensive assessment of its impacts is needed. This study will help in understanding how digital payment systems affect customer satisfaction. This will help banks to know how their digital services are meeting the needs and expectations of customers and in which areas improvement is needed.

2) Customer Experience and Competitiveness:

Competition in the banking industry is constantly increasing, and digital payment systems have become an important tool to attract and retain customers. This study will help banks understand their customer experience, which will help them improve their digital services and increase customer loyalty.

7. LIMITATIONS OF THE STUDY

1) Limited Geographic Area:

This study was conducted only in a limited geographical area, which does not reflect the diversity of banking customers across the country. It may be challenging to generalize the findings of the study to customers in other regions or countries.

2) Limitation of Sample Size:

The study covered only 160 customers who use digital payment systems. This limited sample size may not fully represent the experience and satisfaction of all customers in the banking industry.

3) Subjectivity of Feedback:

Customer satisfaction is a personal experience and its parameters may vary for different people. Hence, the responses obtained in the survey may be subjective, which may limit the validity of the findings.

4) Focus on Digital Users Only:

This study focuses only on customers who are already using digital payment systems. The perspectives of customers who have not yet adopted these systems are not included, which limits the scope of the study.

8. REVIEW OF RELATED LITERATURE

1) Bhattacherjee, A. (2001). "Understanding Information Systems Continuance: An Expectation-Confirmation Model"

   This study provides an in-depth analysis of information systems usage and resulting consumer satisfaction. The researcher used the "Expectation-Confirmation Model" to understand the sustainability of customer satisfaction after using digital services. This model shows that customer expectations and their post-service experience shape their satisfaction with digital services. This research shows that when digital services meet customer expectations, their satisfaction increases, which forms an important reference for this study.

2) Dahlberg, T., Mallat, N., & Öörni, A. (2003). "Consumer Acceptance of Mobile Payment Solutions"

   This research provides an in-depth analysis of consumer acceptance of mobile payment systems. The study concluded that convenience, security, and usability of mobile payments are the key factors of consumer satisfaction. The researchers studied various dimensions of customer acceptance and found that positive attitude towards digital payment systems plays a vital role in enhancing customer satisfaction. This study is important for current research as it helps in understanding the impact of digital payment systems on customers.

3) Gefen, D., Karahanna, E., & Straub, D. W. (2003). "Trust and TAM in Online Shopping: An Integrated Model"

This study focuses on consumers' trust and acceptance in online shopping and the use of digital payment systems. By combining consumers' trust with the "Technology Acceptance Model" (TAM), it is shown that customers' trust in digital services increases their satisfaction level. In particular, customers' trust in security and privacy in online shopping and digital payments affects consumer experience. The findings of this study confirm that there is a positive relationship between trust and satisfaction in digital payment systems, which is also relevant to studies on digital payments in the banking sector.

9. RESEARCH METHODOLOGY

This study uses descriptive research method to analyse the relationship between digital payment systems and customer satisfaction in the banking industry.

1) Sampling:

160 bank customers who are using various digital payment systems (e.g. UPI, net banking, mobile wallets) were selected as the experimental sample for the study. Convenience sampling technique was used to easily reach those customers who regularly use digital payment services.

2) Data Collection:

The survey method was used to collect primary data, in which information was obtained from customers through a structured questionnaire. The questionnaire included questions related to various dimensions of customer satisfaction such as security, speed, simplicity, and usability.

3) Data Analysis:

Descriptive statistics and Pearson Correlation Test were used to analyze the data obtained to understand the relationship between digital payment systems and customer satisfaction.

4) Hypothesis Testing (DATA ANALYSIS):

SPSS software was used to test the hypotheses set in the research to determine whether digital payment systems have a significant impact on customer satisfaction.

HYPOTHESIS TESTING 1-

Descriptive Statistics

	Mean	Std. Deviation	N
Frequency of digital pay	3.5125	.67281	160
Convenience of digital payment	4.3000	.73373	160
Time-saving using digital payment	4.3250	.75694	160
ease of using	4.5313	.69066	160
Overall satisfaction with digital payment	4.0438	.70351	160
Satisfaction with bank service in digital pay	3.8688	.80970	160

The table shows the mean, std. deviation, and sample size (N) of various factors related to digital payment. Let us interpret these statistics:

Frequency of digital payment:

The mean score is 3.5125, which indicates that most of the respondents use digital payment, but its frequency is at a medium level. The standard deviation is 0.67281, which indicates that the fluctuation in this aspect is not much; most people have the same frequency.

Convenience of digital payment:

The mean is 4.3000, which indicates that digital payment is convenient for most people.The standard deviation 0.73373 indicates that there is a medium level of variation among the respondents towards this convenience, i.e. most people find it convenient, but there is a difference in some.

Time saving using digital payment:

The mean 4.3250 indicates that most people consider digital payments to be time saving.The standard deviation is 0.75694, which indicates that most people have a positive opinion, but some may have a slightly different experience.

Ease of using:

The mean 4.5313 shows that most people consider digital payments to be easy to use.The standard deviation is 0.69066, which indicates that there is not much difference among respondents regarding ease of use.

Overall satisfaction with digital payment:

The mean 4.0438 indicates that most people are satisfied with digital payments.The standard deviation 0.70351 shows moderate variation in the level of satisfaction.

Satisfaction with bank services in digital pay:

The mean is 3.8688, which shows that people are satisfied with bank services but this satisfaction is relatively low. The standard deviation is 0.80970, which means that there is some variation in this satisfaction level across respondents.

Brief Analysis:

These statistics show that most respondents have a positive attitude towards various aspects of digital payments such as convenience, time savings, and ease of use. The mean score is around 4, which indicates a satisfactory attitude towards these services, while in some cases, such as satisfaction with bank services, the satisfaction level is slightly low.

Correlations

		Frequency of digital pay	Convenience of digital payment	Time saving using digital payment	ease of using	Overall satisfaction with digital payment	Satisfaction with bank services in digital pay
Frequency of digital pay	Pearson Correlation	1	.553**	.362**	.385**	.431**	.286**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	160	160	160	160	160	160
Convenience of digital payment	Pearson Correlation	.553**	1	.525**	.639**	.584**	.458**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	160	160	160	160	160	160
Time saving using digital payment	Pearson Correlation	.362**	.525**	1	.558**	.481**	.429**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	160	160	160	160	160	160
ease of using	Pearson Correlation	.385**	.639**	.558**	1	.638**	.542**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	160	160	160	160	160	160
	Pearson Correlation	.431**	.584**	.481**	.638**	1	.584**

Overall satisfaction with digital payment	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	160	160	160	160	160	160
Satisfaction with bank service s in digital pay	Pearson Correlation	.286**	.458**	.429**	.542**	.584**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	160	160	160	160	160	160

**. Correlation is significant at the 0.01 level (2-tailed).

Detailed explanation:

Frequescy of digital pay and convenience of digital payment (r = .553):

This correlation is 0.553, which indicates a strong and positive correlation.This means that people who use digital payments more frequently consider it more convenient.Such a correlation indicates that there is a positive relationship between the frequency of digital payment and considering it convenient, making it likely that users may consider it more convenient as the frequency of payment increases.

Frequescy of digital pay and time saving using digital payment (r = .362):

The value of this correlation is 0.362, which is a moderate level of positive correlation. This indicates that using digital payments more frequently may also lead to experiencing time saving, but this relationship is not very strong.This means that increasing the frequency of making digital payments may also slightly increase the sense of time saving, but this effect is relatively limited.

Convenience of digital payment and ease of using (r = .639):

This correlation is the strongest, with a value of 0.639, indicating a highly positive relationship. This indicates that if users perceive digital payment as more convenient, they may also perceive it as easier to use.This strong correlation indicates that the sense of convenience may influence the decision to adopt digital payment and perceive it as easier to use.

Ease of using and overall satisfaction with digital payment (r = .638):

The correlation between these two is 0.638, indicating a strong and positive relationship.This means that if users perceive digital payment as easier to use, they will also be more satisfied with it overall.This indicates that the ease of use of digital payments increases users' overall satisfaction, making users' experience more positive.

Overall satisfaction with digital payment and satisfaction with bank services in digital pay (r = .584):

The correlation between these two is 0.584, which is a strong positive correlation. This indicates that users who are satisfied with digital payment services may also be satisfied with bank services. This correlation indicates that the experience of bank services may contribute to users' overall satisfaction, making their digital payment experience also positive.

Frequency of digital pay and satisfaction with bank services in digital pay (r = .286):

The value of this correlation is 0.286, which is a slight but positive correlation.This means that users who use digital payments more frequently may be slightly more satisfied with bank services, but this relationship is relatively weak. This means that the direct effect of frequency of digital payment is not much on satisfaction with bank services.

Hypothesis Testing 2 -----

Descriptive statistics

perceptionofsecurityindigitalpay	3.7938	1.18744	160
satisfactioninprivacy	3.7938	.86218	160

experienceoffraud	1.8188	.38643	160
overallsatisfactionwithdigitalpayment	4.0438	.70351	160
satisfactionwithbankservicesindigitalpay	3.8688	.80970	160

Descriptive statistics are presented for the five variables in the data, detailing the Mean, Standard Deviation, and Sample Size (N) of each. These statistics help us understand what consumers' opinions are on average across these different aspects and how much variation there is in them.

Let's explain each variable:

Perception of Security in Digital Payment:

Mean: 3.7938, This means that the average score of the answers on perception of security is 3.79. This average value is on a 5-point scale, which indicates that consumers have a mildly positive attitude towards security. Standard Deviation: 1.18744 ,The standard deviation being 1.18 means that there is a variation of about 1.18 in the answers. This shows that there is moderate variation in consumers' perceptions of security.

Satisfaction in Privacy: Mean: 3.7938 ,The mean score of privacy satisfaction is 3.79, which is similar to the perception of security. This shows that most of the respondents are satisfied in terms of privacy as well. Standard Deviation: 0.86218 .The standard deviation is relatively low (0.86), which means that there is more uniformity in respondents' opinions about satisfaction in privacy.

Experience of Fraud: Mean: 1.8188 The mean score of experience of fraud is 1.82, which indicates that the respondents have relatively low experience, possibly because most consumers have not experienced fraud in digital payments.Standard Deviation: 0.38643 .The standard deviation of 0.38 indicates that there is quite low variation in experience of fraud, which suggests that most respondents have similar experiences.

Overall Satisfaction with Digital Payment: Mean: 4.0438 ,The mean score of overall satisfaction is 4.04, which indicates that respondents are very satisfied with digital payments. This score is close to 4, which indicates positive satisfaction.Standard Deviation: 0.70351 ,The standard deviation of 0.70 indicates that there is a little variation in the overall satisfaction, i.e. there are some variations in the satisfaction level of the respondents.

Satisfaction with Bank Services in Digital Payment: Mean: 3.8688,The mean score of satisfaction with bank services is 3.87, which indicates that most of the respondents are satisfied with the bank services.Standard Deviation: 0.80970 ,The standard deviation is 0.81, which indicates that there is a little variation in the opinion of the respondents, but it is not excessive.

Brief analysis:

From these descriptive statistics, it can be understood that most of the respondents are satisfied with security, privacy, and bank services in digital payments. Overall satisfaction and privacy satisfaction show more similarity, while there is some variation in satisfaction with security and bank services. The experience of fraud is relatively low for most of the respondents, which suggests that security measures in digital payments may be effective.

This next table contains five variables that measure consumers' perceptions, satisfaction, and experiences towards different aspects of digital payments. The Pearson Correlation Coefficient is used to understand the strength and direction of correlation between these variables. This table tells us whether there is a positive or negative relationship between these aspects, and if yes, what is the level.

Correlations

	Perception of security in digital pay	Satisfaction in privacy	Experience of fraud	Overall satisfaction with digital payment	Satisfaction with bank services in digital pay

Perception of security in digital pay	Pearson Correlation	1	.493**	.247**	.432**	.377**
	Sig. (2-tailed)		.000	.002	.000	.000
	N	160	160	160	160	160
Satisfaction in privacy	Pearson Correlation	.493**	1	.284**	.616**	.447**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	160	160	160	160	160
Experience of fraud	Pearson Correlation	.247**	.284**	1	.284**	.165*
	Sig. (2-tailed)	.002	.000		.000	.037
	N	160	160	160	160	160
Overall satisfaction with digital payment	Pearson Correlation	.432**	.616**	.284**	1	.584**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	160	160	160	160	160
Satisfaction with bank services in digital pay	Pearson Correlation	.377**	.447**	.165*	.584**	1
	Sig. (2-tailed)	.000	.000	.037	.000	
	N	160	160	160	160	160

**. Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Perception of Security in Digital Payment & Satisfaction in Privacy:

The Pearson Correlation Coefficient between these two variables is .493**, which means that there is a moderate to strong positive relationship between these two. When consumers give more importance to security, they are also more satisfied with their privacy.The p-value of this correlation is .000, which is significant at the 0.01 level. This means that the relationship is statistically significant.

Perception of Security in Digital Payment & Experience of Fraud:

The Pearson Correlation is .247**, which indicates that there is a mild positive correlation between the two. This means that there may be a slight decrease in the experience of fraud when the perception of security increases.This relationship is also significant at the 0.01 level (p = .002), which makes it statistically significant.

Perception of Security in Digital Payment & Overall Satisfaction with Digital Payment:

The Pearson Correlation Coefficient is .432**, which indicates a moderate positive correlation. When the perception of security is strong, the overall satisfaction of consumers also increases.

The p-value of this correlation is .000, which makes it significant at the 0.01 level.

Perception of Security in Digital Payment & Satisfaction with Bank Services in Digital Payment:

The Pearson Correlation Coefficient is .377**, which indicates a moderate positive correlation. When consumers have stronger perception of security, they are also more satisfied with bank services.The p-value is .000, which is significant at the 0.01 level.

Satisfaction in Privacy & Overall Satisfaction with Digital Payment:

The Pearson Correlation Coefficient is .616**, which is a strong positive correlation. This means that when consumers are satisfied with their privacy, their overall satisfaction with digital payments is also higher.The p-value is .000, which makes it significant at the 0.01 level.

Experience of Fraud & Satisfaction with Bank Services in Digital Payment:

The Pearson Correlation between the two is .165*, indicating a slight positive correlation. However, this correlation is relatively weak.The p-value is .037, making it significant at the 0.05 level.

10. CONCLUSION

1.It can be understood from this analysis that several strong and positive correlations have been found between different aspects of digital payment. These correlations indicate that the digital payment experience can affect user satisfaction. In particular, convenience and ease of use of digital payment increase satisfaction. Satisfaction with bank services is also an important aspect of the digital payment experience.For example, when users perceive digital payment as convenient and easy to use, they perceive it as satisfactory. Such relationships suggest that the payment experience can be improved by taking these aspects of digital payment into account, which may increase user satisfaction.

2.According to this correlation table, consumer perception of security and privacy has a positive influence on overall satisfaction with digital payments and satisfaction with bank services.The strongest correlation (.616**) is observed between satisfaction in privacy and overall satisfaction, indicating that satisfaction in privacy is an important factor in overall satisfaction with digital payments.While experience of fraud may also have some influence on satisfaction, its correlation is relatively weak.

11. SUGGESTION

To make the digital payment system more effective and user-friendly, it is necessary to pay attention to various aspects. The study makes it clear that factors such as convenience and ease of use play an important role in increasing user satisfaction. Therefore, the interface of digital payment should be designed in such a way that users do not face any kind of complexity during the transaction. Along with this, it is necessary to improve the quality of banking services, so that users find the digital payment experience satisfactory by associating it with bank services.

Additionally, privacy and security are the key components to strengthen users' trust in digital payments. It is necessary to implement strong privacy measures to assure users of the security of their data. The study also found that privacy satisfaction has the greatest impact on overall satisfaction. Therefore, data security and privacy policies should be made more stringent. It is also imperative to strengthen security measures to prevent fraud incidents and reduce their impact.

Taking regular feedback and making improvements based on it can be an effective strategy to improve consumer experience. Also, it is necessary to educate users about the benefits of digital payments, security methods, and measures to avoid fraud. This will not only improve the user experience but will also increase their trust and satisfaction. By implementing all these measures in an integrated manner, the digital payment system can be made more reliable and useful.

CONFLICT OF INTERESTS

None.

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