

"A Study on Assessing the Impact of UPI on Customer Retention in Indian Retail Banking Sector"

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ABSTRACT

The rapid shift towards a digital payment ecosystem has significantly transformed the Indian banking sector, particularly with the introduction and widespread adoption of the Unified Payments Interface (UPI). This study analyzes the impact of UPI on customer retention in the Indian retail banking sector, focusing on how digital payment convenience, trust, and service quality influence long-term customer relationships. A descriptive research design was adopted, and primary data were collected from a sample of 200 respondents across different demographic groups using a structured questionnaire. The methodology employed in this study aimed to measure factors such as ease of use, security perception, customer satisfaction, digital engagement, and retention behavior. The data were analyzed using descriptive statistics, Pearson correlation, and regression analysis to examine the relationship between UPI usage and customer retention. The findings indicate that UPI usage has a strong positive impact on customer retention, with convenience, time-saving ability, and reliability emerging as key drivers of continued usage. A significant positive correlation was observed between UPI usage and customer retention, suggesting that customers who frequently use UPI services are more likely to remain loyal to their banks. Interestingly, demographic variables such as age, gender, occupation, and education were found to have no significant influence on retention, indicating that UPI adoption is uniform across different population segments. The study concludes that UPI acts as a strategic tool for enhancing customer satisfaction and loyalty in retail banking. To strengthen customer retention, banks should focus on improving service quality, ensuring robust security measures, and continuously innovating digital payment solutions. These insights provide valuable guidance for financial institutions and the Reserve Bank of India in promoting digital banking adoption and strengthening customer relationships in an increasingly competitive environment.

Keywords: UPI, Customer Retention, Digital Payments, Retail Banking, Customer Satisfaction

INTRODUCTION

"In the digital age, the strength of a bank is not only measured by its financial performance but by how effectively it integrates technology into everyday customer life."

The Indian banking sector has undergone a significant transformation with the rapid adoption of digital payment systems. Among these innovations, the Unified Payments Interface (UPI) has emerged as a revolutionary platform, enabling instant, secure, and seamless financial transactions. Launched by the National Payments Corporation of India (NPCI), UPI has reshaped the way customers interact with retail banks by offering convenience, interoperability, and real-time payment solutions.

With increasing smartphone penetration, internet accessibility, and government initiatives promoting a cashless economy, UPI usage has grown exponentially across urban and semi-urban regions of India. Beyond facilitating transactions, UPI has become a strategic tool for banks to enhance customer experience, satisfaction, and long-term engagement. In a highly competitive banking environment, customer retention has become crucial, as retaining existing customers is more cost-effective than acquiring new ones.

Therefore, assessing the impact of UPI services on customer retention in Indian retail banking is essential to understand how digital payment convenience, trust, and service quality influence customers' continued relationship with banks.

REVIEW OF LITERATURE

The rapid growth of digital payment systems has significantly transformed the Indian retail banking sector, with Unified Payments Interface (UPI) emerging as a dominant platform. Several researchers have examined UPI adoption, customer perception, service quality, and digital banking behavior, highlighting its relevance to customer retention.

Mahesh A. and Ganesh Bhat (2021) analyzed digital payment systems in India and found that UPI adoption is largely driven by ease of use, interoperability, and instant transaction processing. Their study indicates that convenience and accessibility encourage repeated usage, which strengthens customer engagement with banks. Murudkar and Patade (2021) examined electronic banking adoption and identified demographic factors such as age, education, and occupation as significant determinants of digital payment usage, with younger customers showing higher dependence on UPI-based services.

Gupta and Malhotra (2021) studied digital banking service quality and concluded that system reliability, speed, and user-friendly interfaces positively influence customer satisfaction and loyalty. Similarly, Khandal (2022) reported that time efficiency and reduced transaction complexity make UPI a preferred mode of payment, thereby increasing customers' continued association with retail banks.

Rao (2022) focused on consumer perception of mobile payment applications and found that trust and perceived security play a crucial role in sustaining long-term usage. The study suggests that customers who feel secure using UPI are more likely to remain loyal to their bank. Mehta et al. (2022) emphasized that seamless integration of UPI with banking services enhances overall customer experience and reduces switching behavior.

Singh and Sharma (2023) highlighted that transparency, data security, and grievance redressal mechanisms improve customer confidence in digital banking platforms. Their findings reveal a strong link between trust in digital payment systems and customer retention. A study by NPCI-related researchers (2023) observed that frequent UPI usage increases customer touchpoints with banks, strengthening relational bonds and reducing churn.

Verma and Kumar (2023) examined customer retention strategies in retail banking and concluded that digital innovation, particularly payment convenience, plays a vital role in maintaining long-term customer relationships. Lastly, Gulzar Singh (2023) emphasized that trust built through secure digital infrastructure and consistent service delivery significantly influences customer loyalty in the banking sector.

Overall, existing literature establishes that UPI positively impacts customer satisfaction, trust, and engagement. However, most studies focus on adoption and perception rather than directly measuring customer retention outcomes. This highlights a clear research gap and justifies the need for the present study on assessing the impact of UPI on customer retention in Indian retail banking. Limited studies specifically examining the relationship between UPI usage and customer retention in Indian retail banking as Most existing research focuses on UPI adoption rather than long-term customer loyalty and retention.

Objectives Of the Study:

- To examine the extent of UPI usage among retail banking customers in India.
- To analyze the impact of UPI services on customer satisfaction and retention.
- To provide suggestions for banks to improve customer retention through UPI-based services.

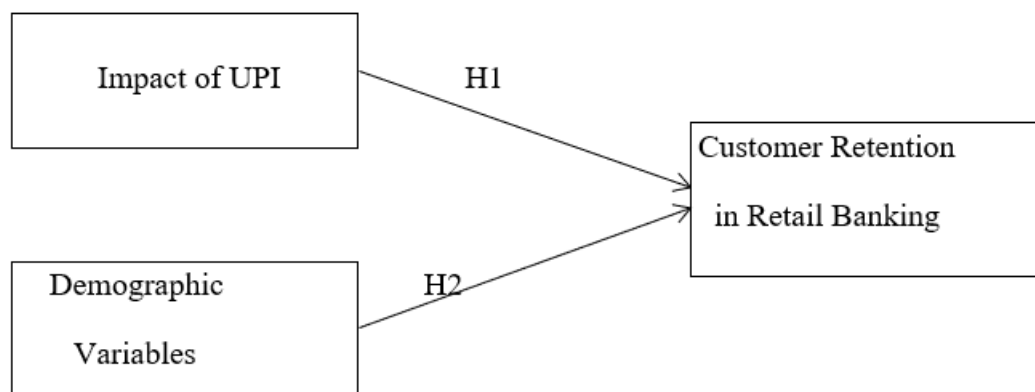
RESEARCH METHODOLOGY

In this study, a systematic approach is used to analyse the impact of UPI services on customer satisfaction, customer retention, and bank loyalty in the Indian retail banking sector. The study is quantitative in nature and is based on structured data collected through questionnaires. The primary data is collected directly from respondents through a structured questionnaire. The data focuses on customer perception, satisfaction, usage behaviour, and retention related to UPI services. The sampling unit consists of individuals aged between 18 to 58+ years who actively use UPI services for digital transactions such as fund transfers, bill payments, and merchant payments. The sample size for the study is approximately 150–200 respondents to ensure meaningful and reliable results. Convenience sampling method is used, where respondents are selected based on their availability and willingness to participate in the survey. The collected data will be organized, classified, and tabulated in a systematic manner to ensure accuracy and clarity.

CONCEPTUAL FRAMEWORK

A conceptual framework given as figure 1 provides a structured representation of the key variables in a study and explains the relationships between them. In this research, the framework is developed to examine how the impact of UPI and demographic variables influence customer retention in retail banking. The conceptual framework illustrates the relationship between the independent variables (impact of UPI and demographic variables) and the dependent variable (customer retention in retail banking), providing a clear direction for analyzing their influence within the study.

Figure 1 – Conceptual Framework



Analysis And Interpretation

Independent Variables

• UPI Usage:

This refers to the extent to which customers use UPI services for digital transactions such as fund transfers, bill payments, and merchant payments. It includes frequency of usage, convenience, speed, and overall dependency on UPI platforms.

• Demographic Factors:

These variables help to understand differences in customer behaviour and retention based on personal characteristics:

- **Age:** Determines how different age groups adopt and continue using UPI services. Younger users are generally more active in digital transactions compared to older users.

- **Gender:** Helps analyse whether there is any variation in UPI usage and retention behaviour between male and female customers.
- **Occupation:** Identifies how profession (such as students, salaried employees, business owners) influences the usage and continued adoption of UPI services.
- **Qualification:** Examines the impact of educational background on awareness, usage, and retention of UPI services.

Dependent Variable

• Customer Retention in Retail Banking:

This represents the final outcome of the study, indicating the ability of banks to retain customers through UPI services. It reflects customers' intention to continue using UPI, maintain long-term relationships with their bank, and their reduced likelihood of switching to other banks due to satisfaction and convenience provided by UPI.

Table 1: Regression Analysis

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Demographic, UPI_Usage ^b	.	Enter
a. Dependent Variable: Customer_Retention			
b. All requested variables entered.			

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ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.633	2	7.816	85.934	.000 ^b
	Residual	17.919	197	.091		
	Total	33.551	199			
a. Dependent Variable: Customer_Retention						
b. Predictors: (Constant), Demographic, UPI_Usage						

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.191	.255		4.669	.000
	UPI_Usage	.863	.066	.683	13.096	.000
	Demographi c	-.003	.061	-.002	-.047	.962

a. Dependent Variable: Customer_Retention

The regression equation given in table 1 measures the variables that affect customer retention in retail banking with respect to UPI usage and demographic factors. The model exhibits a good fit, as the value of the R square is 0.466, which implies that the predictors selected are able to explain about 46.6% of the variation in customer retention.

The model is found to be statistically significant according to the results of the ANOVA test ($F = 85.934$, $p < .001$), indicating that the independent variables collectively have a significant effect on customer retention.

The Coefficients table shows that the most significant predictor ($p < .001$) is UPI Usage ($b = 0.863$), which has a strong positive impact on customer retention. This indicates that increased usage of UPI services leads to higher customer retention in retail banking.

On the other hand, Demographic Factors ($b = -0.003$, $p = .962$) are not statistically significant in this model, suggesting that variables such as age, gender, occupation, and qualification do not have a meaningful impact on customer retention.

Table 2: CORRELATION

Correlations				
		Demographic	UPI_Usage	Customer_Retention
Demographic	Pearson Correlation	1	.049	.031
	Sig. (2-tailed)		.490	.663
	N	200	200	200
UPI_Usage	Pearson Correlation	.049	1	.683**
	Sig. (2-tailed)	.490		.000
	N	200	200	200
Customer_Retention	Pearson Correlation	.031	.683**	1
	Sig. (2-tailed)	.663	.000	
	N	200	200	200

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

The Pearson correlation analysis reveals mixed relationships among the variables, with only one strong and statistically significant association observed. The relationship between **UPI Usage and Customer Retention** shows a high positive correlation ($r = 0.683$), which is significant at the 0.01 level ($p < 0.001$) as given in table 2. This indicates that increased usage of UPI services strongly influences customer retention, suggesting that customers who frequently use digital payment systems are more likely to remain loyal to their banks.

On the other hand, the correlation between **Demographic variables and UPI Usage** is very weak and positive ($r = 0.049$) but statistically insignificant ($p = 0.490 > 0.05$). This implies that demographic factors such as age, gender, education, and occupation do not meaningfully impact the adoption or usage of UPI.

Similarly, the relationship between **Demographic variables and Customer Retention** is also negligible and insignificant ($r = 0.031$, $p = 0.663 > 0.05$), indicating that customer retention is not influenced by demographic characteristics.

Overall, the analysis highlights that **UPI usage is the key driver of customer retention**, while demographic

factors do not play a significant role in influencing either UPI adoption or retention behavior in the context of retail banking.

Table 3: Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Age	200	2	4	2.54	.769
Gender	200	1	2	1.47	.501
Occupation	200	1	3	1.92	.683
Qualification	200	2	4	2.69	.818
UPI_Use	200	1	1	1.00	.000
Frequency	200	1	2	1.52	.501
Ease	200	3	5	4.22	.688
Security	200	3	5	4.13	.756
Saves_Time	200	3	5	4.08	.762
Prefer_UPI	200	3	5	4.12	.710
Daily_Use	200	3	5	4.07	.716
Reliable_UPI	200	3	5	4.05	.728
Satisfaction	200	3	5	4.12	.747
Continue	200	3	5	4.11	.733
Recommend	200	3	5	4.09	.738
Trust	200	3	5	4.10	.754
Switch	200	3	5	4.11	.735
Digital_Needs	200	3	5	4.15	.721
Loyalty	200	3	5	4.19	.730
Retention_Impact	200	3	5	4.08	.749
Valid N (listwise)	200				

The table 3 shows the descriptive statistics, which provide a clear overview of the responses of 200 respondents regarding UPI usage and customer retention in retail banking. The demographic profile reflects a moderately diverse sample, with the mean scores of Age (2.54) and Qualification (2.69) indicating that most respondents belong to middle age groups with a reasonably good educational background. The mean values for Gender (1.47) and Occupation (1.92) suggest a balanced representation across categories, though with slight variation.

In terms of UPI adoption, the mean value of UPI_Use (1.00) with zero standard deviation confirms that all respondents are active users of UPI, making the dataset highly relevant for analyzing digital payment behavior. The Frequency (1.52) indicates that respondents use UPI regularly, reflecting its integration into their daily financial activities.

Regarding user perception, variables such as Ease of Use (Mean = 4.22), Security (4.13), and Saves Time (4.08) have high mean scores, showing that respondents strongly agree that UPI is convenient, secure, and efficient. Similarly, Preference for UPI (4.12), Daily Use (4.07), and Reliability (4.05) indicate that users view UPI as a dependable and preferred mode of payment.

Customer satisfaction and behavioral intentions also reflect positive outcomes. The mean values for Satisfaction (4.12), Continue Usage (4.11), and Recommendation (4.09) demonstrate that users are satisfied

and willing to continue and promote UPI services. Additionally, Trust (4.10) and Switch (4.11) suggest strong confidence in UPI with low inclination to shift to alternative payment methods.

Furthermore, factors related to retention such as Digital Needs (4.15), Loyalty (4.19), and Retention Impact (4.08) have consistently high mean scores, indicating that UPI effectively meets users' digital expectations and contributes positively to customer loyalty and retention in banking services.

Overall, the relatively low standard deviations (mostly between 0.6–0.8) across the Likert-scale variables indicate a high level of agreement among respondents. The findings suggest that practical benefits such as ease, reliability, and time-saving features are the key drivers of UPI adoption, which in turn significantly enhances customer satisfaction and retention in the retail banking sector.

Table 4: Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.795	14

The reliability of the questionnaire was tested using Cronbach's Alpha to assess the internal consistency of the items included in the study. The results show that the Cronbach's Alpha value is 0.795 for 14 items, indicating a good level of reliability.

A Cronbach's Alpha value above 0.70 is generally considered acceptable for research purposes, while values between 0.70 and 0.80 reflect good internal consistency among the items. Therefore, the obtained value of 0.795 suggests that the 14 items in the questionnaire are consistently measuring the intended constructs related to UPI usage and customer retention.

This indicates that the responses are reliable and there is a reasonable degree of correlation among the items. Hence, the questionnaire can be considered reliable and suitable for further statistical analyses, such as correlation and regression, in the study.

FINDINGS

- A large proportion of the 200 respondents are active users of UPI services, confirming widespread adoption of digital payment systems in the retail banking sector.
- The demographic profile shows a balanced representation across age groups, gender, occupation, and educational qualifications, indicating that UPI usage is common across diverse population segments.
- The majority of respondents use UPI frequently (daily or weekly), highlighting its integration into routine financial transactions such as bill payments and fund transfers.
- UPI services are perceived as highly convenient, with a mean score of 4.22 for ease of use, indicating strong agreement among users regarding its simplicity and accessibility.
- Security and trust levels are also high, with a mean score of 4.13, suggesting that users feel confident while conducting transactions through UPI platforms.
- Time-saving capability is a major advantage, with a mean score of 4.08, showing that respondents consider UPI more efficient than traditional banking methods.
- Preference for UPI over cash transactions is high (mean = 4.12), indicating a shift towards a cashless economy among users.

- Customer satisfaction with banking services is strong (mean = 4.12), reflecting positive experiences with UPI-enabled banking.
- A high proportion of respondents expressed intention to continue using their current bank (mean = 4.11), showing strong retention behavior.
- Recommendation behavior is also positive (mean = 4.09), indicating that satisfied customers are willing to promote their bank to others.
- Trust in banks for financial transactions is high (mean = 4.10), reinforcing the role of reliability in customer retention.
- The regression analysis shows that UPI usage has a strong positive impact on customer retention, with a beta coefficient of 0.863 ($p < 0.001$), making it the most significant predictor.
- The model explains 46.6% of the variation in customer retention ($R^2 = 0.466$), indicating a moderate level of explanatory power.
- Demographic variables such as age, gender, occupation, and qualification were found to be statistically insignificant ($p = 0.962$), suggesting that retention is not influenced by these factors.
- Pearson correlation analysis reveals a strong positive relationship ($r = 0.683$, $p < 0.001$) between UPI usage and customer retention.
- The relationship between demographic variables and both UPI usage and customer retention is weak and insignificant, indicating uniform adoption across groups.
- Reliability analysis shows a Cronbach's Alpha of 0.795, indicating good internal consistency of the questionnaire items.
- Overall, convenience, trust, satisfaction, and frequent usage of UPI are the key drivers of customer retention in Indian retail banking.

Suggestions

- Banks should enhance the ease of use and interface design of UPI applications to ensure a smooth and user-friendly experience for all customer segments.
- Strong security systems such as multi-factor authentication and real-time fraud detection should be implemented and clearly communicated to customers to increase trust.
- Awareness programs should be conducted to educate customers about safe usage of UPI and digital banking services, especially for new users.
- Banks should focus on improving service quality rather than demographic targeting, as retention is not significantly influenced by demographic factors.
- Customer support services should be strengthened with quick grievance redressal mechanisms to enhance customer satisfaction and trust.
- Incentives such as cashback, discounts, and loyalty rewards should be introduced to encourage frequent usage of UPI services.
- Integration of UPI with other banking services such as savings, loans, and investments should be improved to increase customer engagement.

- Banks should ensure system reliability by minimizing transaction failures, downtime, and technical errors.
- Personalized banking services based on user behavior should be developed to strengthen long-term relationships with customers.
- Continuous innovation in digital payment technologies should be encouraged to maintain competitiveness in the banking sector.

CONCLUSION

This study concludes that UPI has significantly transformed the retail banking sector by enhancing customer convenience, satisfaction, and overall banking experience. The findings indicate that UPI usage plays a crucial role in improving customer retention, as supported by strong regression and correlation results.

The study reveals that customers highly value the ease of use, security, and efficiency of UPI services, which encourages frequent usage and strengthens their relationship with banks. High levels of satisfaction, trust, and recommendation behavior further confirm that UPI contributes positively to customer loyalty.

Interestingly, demographic variables such as age, gender, occupation, and education do not significantly influence customer retention, indicating that UPI adoption is widespread and universal across different customer groups.

Although the model explains a moderate proportion of variation in retention, it highlights the importance of digital banking services in shaping customer behavior. The study emphasizes that banks must focus on improving service quality, ensuring security, and adopting innovative technologies to sustain customer relationships.

Overall, UPI has emerged as a powerful strategic tool for customer retention, and its continued development will play a vital role in the growth and modernization of the Indian banking system.

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