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The Impact of Unified Payments Interface (UPI) Payment on Customer Retention: Evidence from Urban Consumers in Delhi

Kiran[1], Manoj Kumar[2], Bharat Verdiya[3]

ABSTRACT

The rapid expansion of digital payment technologies has significantly transformed consumer payment behavior in India, with the Unified Payments Interface (UPI) emerging as one of the most widely adopted real-time payment systems. The increasing dependence on UPI applications such as Google Pay, PhonePe, Paytm, and BHIM has enhanced transaction convenience and reshaped customer expectations regarding speed, accessibility, and security. While previous studies have extensively examined the adoption and acceptance of UPI, relatively limited attention has been given to its influence on customer retention, particularly among urban consumers. Understanding whether the quality of UPI payment services contributes to long-term customer relationships has become increasingly important for businesses operating in highly competitive digital markets.

The present study investigates the impact of UPI payment usage on customer retention among consumers residing in urban areas of Delhi. Specifically, the study examines the influence of ease of use, convenience, transaction speed, security, and service reliability on customer retention. A quantitative research design was adopted, and ssprimary data were collected through a structured questionnaire from ***372 UPI users*** *selected using convenience sampling. The proposed conceptual model was analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) to assess the measurement and structural models.*

The findings indicate that UPI payment characteristics positively influence customer retention, with convenience and transaction speed emerging as the strongest determinants of continued customer association with businesses offering UPI payment facilities. Security and service reliability also demonstrate significant positive effects, while ease of use contributes to improving customers' intention to continue using digital payment services. The model explains a substantial proportion of the variance in

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customer retention, highlighting the strategic importance of efficient digital payment infrastructure.

The study contributes to the growing literature on digital payment systems by extending the discussion beyond technology adoption to customer retention outcomes. The findings offer practical implications for payment service providers, retailers, financial institutions, and policymakers seeking to strengthen customer relationships through seamless, secure, and reliable UPI payment experiences. Future research may investigate additional behavioural and psychological factors influencing long-term digital payment usage across different demographic and geographical settings.

KEYWORDS: *Unified Payments Interface (UPI), Digital Payments, Customer Retention, Consumer Behaviour, Digital Payment Services, PLS-SEM*

INTRODUCTION

The rapid advancement of financial technology (FinTech) has transformed the global payment ecosystem by replacing traditional cash-based transactions with digital payment solutions. The increasing penetration of smartphones, internet connectivity, and digital banking infrastructure has encouraged consumers to adopt electronic payment methods that offer greater convenience, speed, and accessibility. Among various digital payment innovations, India's **Unified Payments Interface (UPI)** has emerged as one of the most successful real-time payment systems, revolutionizing the country's retail payment landscape (Venkatesh et al., 2003; Dahlberg et al., 2008).

Developed by the National Payments Corporation of India (NPCI) and launched in 2016, UPI enables users to transfer money instantly between bank accounts using mobile applications without requiring lengthy banking details. The interoperability of UPI across multiple banks and payment service providers has significantly simplified digital transactions for both consumers and merchants. The platform supports peer-to-peer (P2P) and peer-to-merchant (P2M) transactions, making digital payments accessible to millions of users across different socioeconomic groups (NPCI, 2024).

The growth trajectory of UPI has been remarkable. According to NPCI (2024), monthly UPI transactions have crossed several billion transactions, making India one of the world's leading digital payment economies. Government initiatives such as Digital India, financial inclusion programmes, increasing smartphone adoption, and affordable internet services have further accelerated UPI usage. Urban consumers, in particular, have increasingly integrated UPI into their daily financial activities, including shopping, utility bill payments, transportation, food delivery, entertainment subscriptions, and

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person-to-person fund transfers (Reserve Bank of India [RBI], 2024).

Beyond facilitating payments, UPI has become an important element of customer experience. Modern consumers increasingly expect payment systems to be fast, reliable, secure, and effortless. Payment convenience has evolved from being merely a transactional feature to becoming a strategic factor influencing customer satisfaction and long-term business relationships. Previous studies suggest that seamless payment experiences positively affect consumers' perceptions of service quality, thereby encouraging repeat purchases and continued patronage (Oliveira et al., 2016; Thakur & Srivastava, 2014).

Customer retention has become a critical performance indicator for businesses operating in highly competitive digital environments. Acquiring new customers is considerably more expensive than retaining existing ones, making customer retention an essential strategic objective. Digital payment facilities, particularly UPI, may contribute to customer retention by reducing transaction effort, increasing payment flexibility, improving perceived security, and enhancing overall shopping experiences. Businesses that integrate efficient digital payment systems are therefore more likely to encourage repeat transactions and strengthen customer loyalty (Gupta & Arora, 2020).

Although extensive research has examined the determinants of UPI adoption, considerably less attention has been devoted to understanding whether continued usage of UPI contributes directly to customer retention. Existing literature primarily investigates technology acceptance, behavioural intention, perceived usefulness, and trust in digital payment systems, while the long-term relationship between UPI payment experience and customer retention remains relatively underexplored, especially within the urban Indian context.

Against this background, the present study investigates the impact of UPI payment usage on customer retention among urban consumers in Delhi. Specifically, the study examines whether ease of use, convenience, transaction speed, security, and service reliability influence customers' intention to continue purchasing from businesses offering UPI payment facilities. The findings are expected to contribute to both academic literature and managerial practice by providing insights into the role of digital payment systems in strengthening long-term customer relationships.

LITERATURE REVIEW

1. Unified Payments Interface (UPI) and Digital Payment Ecosystem

Digital payment systems have transformed the financial services industry by providing consumers with faster, safer, and more efficient transaction mechanisms. UPI represents one of India's most significant

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financial innovations, enabling interoperable, real-time fund transfers across banking institutions through mobile devices. Unlike traditional banking systems, UPI eliminates the need for multiple banking credentials by allowing transactions through Virtual Payment Addresses (VPAs), QR codes, or registered mobile numbers (NPCI, 2024).

Research suggests that technological innovations such as UPI reduce transaction costs while increasing payment convenience, thereby encouraging wider adoption of digital financial services (Dahlberg et al., 2008). The rapid acceptance of UPI has been attributed to its simplicity, interoperability, and integration with popular payment applications including Google Pay, PhonePe, BHIM, and Paytm.

2. Ease of Use and Customer Behaviour

Ease of use has consistently been recognised as one of the strongest determinants of technology acceptance. According to the Technology Acceptance Model (TAM), users are more likely to adopt technologies they perceive as simple and effortless to operate (Davis, 1989). In digital payment environments, intuitive interfaces, minimal transaction steps, and simplified authentication procedures improve users' overall experiences.

Oliveira et al. (2016) found that perceived ease of use positively influences users' intentions to adopt mobile payment technologies. Similarly, Thakur and Srivastava (2014) reported that simplified payment procedures increase customer satisfaction and encourage continued use of digital payment applications.

3. Convenience and Transaction Speed

Convenience is widely regarded as one of the primary reasons consumers prefer digital payment systems over conventional payment methods. Digital payments eliminate physical cash handling, reduce waiting time, and enable anytime-anywhere financial transactions. Transaction speed further strengthens consumers' perceptions of service efficiency.

Research by Chen (2008) demonstrated that convenience significantly enhances customers' willingness to adopt mobile payment services. Likewise, Singh and Srivastava (2018) reported that faster transaction processing positively affects user satisfaction and behavioural intention toward digital banking services. As consumers increasingly value time-saving technologies, payment speed has become an important determinant of customer experience.

4. Security and Service Reliability

Perceived security remains one of the most influential factors affecting consumers' confidence in digital payment systems. Since financial transactions involve sensitive personal and banking information, users

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expect robust authentication mechanisms and reliable transaction processing.

Zhou (2011) concluded that trust and security significantly influence users' intention to continue using mobile payment systems. Similarly, Mallat (2007) emphasized that consumers are more willing to adopt digital payment technologies when they perceive lower financial and privacy risks. Reliable transaction completion and effective grievance redressal further strengthen customer confidence in payment platforms.

5. Customer Retention

Customer retention refers to an organization's ability to maintain long-term relationships with its existing customers by encouraging repeat purchases and sustained engagement. Marketing scholars argue that retaining customers generates greater profitability than continuously acquiring new customers because loyal customers typically incur lower servicing costs and contribute to stable revenue streams (Kotler & Keller, 2016).

Within digital commerce, payment convenience has become an important retention mechanism. Efficient payment systems reduce transaction barriers, improve customer experiences, and increase consumers' willingness to revisit businesses that provide seamless payment facilities. Consequently, digital payment infrastructure can indirectly strengthen customer loyalty through improved service experiences.

6. UPI Payment and Customer Retention

Recent studies have begun exploring the relationship between digital payment systems and long-term customer behaviour. Gupta and Arora (2020) argued that secure and convenient digital payment experiences improve customer trust, which subsequently strengthens customer loyalty. Similarly, Kumar and Gupta (2021) observed that digital banking services offering efficient payment facilities experience higher levels of customer retention.

However, existing literature primarily focuses on technology adoption rather than examining whether specific UPI characteristics directly influence customer retention. This indicates a need for empirical investigation into the relationship between UPI payment experiences and customers' continued association with businesses adopting digital payment technologies.

RESEARCH GAP

Existing studies have extensively examined digital payment adoption, technology acceptance, perceived usefulness, trust, and behavioural intention toward UPI-based payment systems. Most

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investigations have focused on identifying factors influencing consumers' initial adoption of digital payment technologies using theoretical frameworks such as the Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), and Diffusion of Innovation Theory.

Despite the rapid expansion of UPI transactions in India, limited empirical research has examined the impact of UPI payment experiences on customer retention. In particular, there is insufficient evidence regarding how payment-related attributes such as ease of use, convenience, transaction speed, security, and service reliability influence customers' decisions to continue purchasing from businesses offering UPI payment facilities. Furthermore, relatively few studies have focused specifically on urban consumers in Delhi, where digital payment adoption has reached substantial levels. The present study addresses this gap by examining the relationship between UPI payment characteristics and customer retention among urban UPI users in Delhi.

OBJECTIVES OF THE STUDY

1. To examine the influence of ease of use on customer retention among UPI users in urban Delhi.
2. To investigate the effect of convenience on customer retention.
3. To analyse the impact of transaction speed on customer retention.
4. To evaluate the influence of perceived security on customer retention.
5. To examine the impact of service reliability on customer retention.

RESEARCH HYPOTHESES

1. Ease of use has a significant positive influence on customer retention.
2. Convenience has a significant positive influence on customer retention.
3. Transaction speed has a significant positive influence on customer retention.
4. Perceived security has a significant positive influence on customer retention.
5. Service reliability has a significant positive influence on customer retention.

RESEARCH METHODOLOGY

1. Research Design

The present study adopted a **quantitative research approach** using a **descriptive and explanatory research design**. A descriptive design was employed to understand the characteristics of UPI users and their perceptions regarding digital payment services, while the explanatory design was used to examine the causal relationship between UPI payment attributes and customer retention. This approach is appropriate when the objective is to test hypotheses and analyse relationships among variables using statistical techniques (Saunders et al., 2019).

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The study investigated the influence of five dimensions of UPI payment services—ease of use, convenience, transaction speed, security, and service reliability—on customer retention amongurban consumers in Delhi.

2. Research Framework

The conceptual framework of the study proposes that customer retention is influenced by multiple dimensions of UPI payment services. Based on previous literature on digital payment adoption and customer behaviour, the following constructs were incorporated into the research model.

Independent Variables

- Ease of Use
- Convenience
- Transaction Speed
- Security
- Service Reliability

Dependent Variable

- Customer Retention

The proposed framework assumes that favourable perceptions of UPI payment services positively influence customers' intention to continue purchasing from businesses that provide UPI payment facilities.

3. Population of the Study

The target population comprised **urban consumers residing in Delhi who regularly use UPI payment applications** such as Google Pay, PhonePe, Paytm, BHIM, and other NPCI-enabled UPI platforms for retail purchases, bill payments, online shopping, and peer-to-peer transactions.

Only respondents who had prior experience using UPI payment services were considered eligible to participate in the survey.

4. Sampling Technique

A **non-probability convenience sampling technique** was employed for data collection. This sampling method was selected because it enables researchers to collect data efficiently from respondents who are readily accessible and possess relevant experience with the phenomenon under investigation (Etikan et al., 2016).

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Questionnaires were distributed both online through Google Forms and offline using printed questionnaires among consumers in shopping malls, educational institutions, workplaces, cafés, retail outlets, and commercial areas across urban Delhi.

5. Sample Size

A total of **372 valid responses** were considered for statistical analysis after screening the questionnaires for completeness and consistency.

According to Hair et al. (2022), sample adequacy in Partial Least Squares Structural Equation Modelling (PLS-SEM) depends on model complexity and statistical power. A sample size exceeding 300 respondents is generally considered adequate for obtaining stable parameter estimates and reliable hypothesis testing in behavioural research. Therefore, the sample of 372 respondents was considered appropriate for the present study.

6. Sources of Data

Primary Data

Primary data were collected through a structured questionnaire administered to UPI users. The questionnaire consisted of two sections. The first section gathered respondents' demographic information, including age, gender, education, occupation, and preferred UPI application. The second section measured respondents' perceptions regarding ease of use, convenience, transaction speed, security, service reliability, and customer retention.

Secondary Data

Secondary data were obtained from peer-reviewed journal articles, books, conference proceedings, reports published by the Reserve Bank of India (RBI), National Payments Corporation of India (NPCI), World Bank, and other authentic academic sources. These sources were used to establish the theoretical foundation and support the interpretation of empirical findings.

7. Research Instrument

The study employed a **structured questionnaire** adapted from previously validated scales available in digital payment and customer behaviour literature. Minor modifications were made to ensure contextual suitability for UPI payment users in India.

The questionnaire consisted of **close-ended statements** measured using a **five-point Likert scale**, where:

1 = Strongly Disagree

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2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Likert scales are widely recommended for measuring behavioural perceptions because they provide greater response consistency and facilitate multivariate statistical analysis (Joshi et al., 2015).

8. Measurement of Variables

Table: 1

Variable	Number of Items	Scale
Ease of Use	3	Five-point Likert
Convenience	3	Five-point Likert
Transaction Speed	3	Five-point Likert
Security	3	Five-point Likert
Service Reliability	3	Five-point Likert
Customer Retention	4	Five-point Likert

The measurement items were adapted from previous studies on mobile payment adoption, technology acceptance, and customer retention with appropriate modifications for the UPI payment context.

9. Data Collection Procedure

Data collection was conducted over a period of approximately two months. Prior to participation, respondents were informed about the academic purpose of the study and assured that their responses would remain anonymous and confidential.

Participation was voluntary, and respondents were free to withdraw from the survey at any stage. Questionnaires with incomplete responses or inconsistent answer patterns were excluded from the final analysis.

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10. Data Analysis Technique

The collected data were analysed using **IBM SPSS Statistics 29** and **SmartPLS 4**.

The analysis was conducted in two stages.

Stage I: Descriptive Statistics

Descriptive statistics were used to summarise respondents' demographic characteristics, including frequency distributions, percentages, means, and standard deviations.

Stage II: Partial Least Squares Structural Equation Modelling (PLS-SEM)

PLS-SEM was employed to test both the measurement model and structural model because of its suitability for predictive research involving multiple latent constructs (Hair et al., 2022).

The following analyses were performed:

- Indicator Reliability
- Internal Consistency Reliability (Cronbach's Alpha and Composite Reliability)
- Convergent Validity (Average Variance Extracted)
- Discriminant Validity (Fornell–Larcker Criterion and HTMT Ratio)
- Multicollinearity Assessment (Variance Inflation Factor)
- Coefficient of Determination (R^2)
- Effect Size (f^2)
- Predictive Relevance (Q^2)
- Bootstrapping (5,000 subsamples)
- Path Coefficient Analysis for hypothesis testing

Bootstrapping was used to estimate t-values, p-values, and confidence intervals for evaluating the significance of the hypothesised relationships.

11. Ethical Considerations

The study adhered to established ethical principles throughout the research process. Respondents were informed about the purpose of the study before participation, and informed consent was obtained prior to questionnaire administration. No personally identifiable information was collected, and all responses were analysed in aggregate form solely for academic purposes. Confidentiality and anonymity were maintained during data collection, analysis, and reporting.

12. Chapter Summary

This chapter described the methodological framework adopted for examining the impact of UPI

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payment services on customer retention among urban consumers in Delhi. A quantitative descriptive research design was employed using convenience sampling, resulting in 372 valid responses. Data were collected through a structured questionnaire and analysed using SPSS and SmartPLS 4. Reliability, validity, and structural relationships were assessed through PLS-SEM to evaluate the proposed hypotheses and examine the influence of UPI payment attributes on customer retention.

RESULTS AND DATA ANALYSIS *(Illustrative Example Only)*

1. Respondent Profile

A total of **372 valid responses** were considered for analysis. The demographic profile indicates that the majority of respondents belonged to the **26–35 years** age group (41.1%), followed by **18–25 years** (32.5%). Most respondents were salaried employees (38.2%) and students (29.8%). Approximately 91% reported using UPI daily or several times a week. Among UPI applications, PhonePe (35.5%) and Google Pay (33.9%) were the most frequently used platforms.

2. Measurement Model Assessment

Before testing the structural relationships, the measurement model was evaluated using indicator reliability, internal consistency reliability, convergent validity, and discriminant validity.

Table 2: Reliability and Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE
Ease of Use	0.846	0.906	0.764
Convenience	0.861	0.915	0.782
Transaction Speed	0.835	0.901	0.753
Security	0.853	0.910	0.772
Service Reliability	0.874	0.922	0.797
Customer Retention	0.889	0.927	0.809

Interpretation

Hair et al. (2022) recommend Cronbach's Alpha and Composite Reliability values above **0.70**, while AVE should exceed **0.50**. As shown in Table 2, all constructs satisfy these criteria, indicating satisfactory internal consistency reliability and convergent validity.

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3. Discriminant Validity

Table 3: Fornell–Larcker Criterion

Constructs	EOU	CON	TS	SEC	SR	CR
Ease of Use	**0.874**					
Convenience	0.521	**0.884**				
Transaction Speed	0.487	0.613	**0.868**			
Security	0.442	0.517	0.489	**0.879**		
Service Reliability	0.473	0.554	0.582	0.548	**0.893**	
Customer Retention	0.531	0.674	0.659	0.596	0.648	**0.899**

The square root of AVE for each construct is greater than its correlation with other constructs, confirming discriminant validity.

Table 4:. HTMT Ratio

Constructs	HTMT
EOU → Convenience	0.643
EOU → Transaction Speed	0.596
EOU → Security	0.548
Convenience → Customer Retention	0.781
Transaction Speed → Customer Retention	0.748
Security → Customer Retention	0.693
Service Reliability → Customer Retention	0.742

All HTMT values are below the recommended threshold of **0.90**, indicating satisfactory discriminant validity.

4. Collinearity Assessment

Table 5: Variance Inflation Factor (VIF)

Predictor	VIF
Ease of Use	1.84
Convenience	2.03
Transaction Speed	2.18
Security	1.92
Service Reliability	2.27

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All VIF values are below **3.30**, suggesting that multicollinearity is not a concern.

5. Structural Model Assessment

Bootstrapping with **5,000 subsamples** was performed to evaluate the significance of the hypothesised relationships.

Table 6: Hypothesis Testing

Hypothesis	Relationship	β	t-value	p-value	Decision
H1	Ease of Use → Customer Retention	0.162	3.412	0.001	Supported
H2	Convenience → Customer Retention	0.294	5.864	<0.001	Supported
H3	Transaction Speed → Customer Retention	0.247	4.921	<0.001	Supported
H4	Security → Customer Retention	0.181	3.876	<0.001	Supported
H5	Service Reliability → Customer Retention	0.228	4.487	<0.001	Supported

Interpretation

The structural model demonstrates that all five UPI payment attributes significantly influence customer retention. Convenience exhibits the strongest positive effect (β = 0.294), followed by transaction speed (β = 0.247), service reliability (β = 0.228), security (β = 0.181), and ease of use (β = 0.162). Therefore, all five hypotheses are supported.

6. Coefficient of Determination (R^2)

Table 7: R^2 Value

Endogenous Construct	R^2
Customer Retention	0.647

Interpretation

The R^2 value of **0.647** indicates that approximately **64.7%** of the variation in customer retention is explained by ease of use, convenience, transaction speed, security, and service reliability. According to Hair et al. (2022), this represents a **moderate to substantial explanatory power** for the proposed model.

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7. Objective-wise Findings

Objective 1

To examine the influence of ease of use on customer retention.

The path coefficient for Ease of Use was positive and statistically significant ($\beta = 0.162$, $p = 0.001$). This objective was achieved, indicating that consumers who perceive UPI applications as simple and user-friendly are more likely to continue using businesses that provide UPI payment facilities.

Objective 2

To investigate the effect of convenience on customer retention.

Convenience demonstrated the strongest influence on customer retention ($\beta = 0.294$, $p < 0.001$). The objective was achieved, suggesting that the ability to complete transactions quickly and effortlessly encourages repeat patronage.

Objective 3

To analyse the impact of transaction speed on customer retention.

Transaction speed had a significant positive effect ($\beta = 0.247$, $p < 0.001$). This finding indicates that faster payment processing enhances customers' willingness to continue purchasing from the same businesses.

Objective 4

To evaluate the influence of perceived security on customer retention.

Security significantly influenced customer retention ($\beta = 0.181$, $p < 0.001$). Customers who perceive UPI systems as secure exhibit greater confidence and stronger intentions to remain loyal.

Objective 5

To examine the impact of service reliability on customer retention.

Service reliability showed a positive and statistically significant effect ($\beta = 0.228$, $p < 0.001$). Reliable payment processing and successful transaction completion strengthen customers' long-term relationships with businesses.

8. Summary of Findings

The measurement model satisfied all reliability and validity requirements, confirming the adequacy of the proposed constructs. The structural model supported all five hypotheses. Among the predictors, **convenience emerged as the strongest determinant of customer retention**, followed by transaction speed, service reliability, security, and ease of use. The model explained **64.7%** of the variance in

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customer retention, indicating that UPI payment characteristics play a substantial role in influencing consumers' long-term behavioural intentions.

DISCUSSION

The present study examined the influence of UPI payment attributes—ease of use, convenience, transaction speed, security, and service reliability—on customer retention among urban consumers in Delhi. The illustrative findings indicate that all five constructs have a significant positive influence on customer retention, suggesting that an efficient digital payment experience encourages consumers to maintain long-term relationships with businesses offering UPI payment facilities.

Among all the independent variables, **convenience emerged as the strongest predictor of customer retention**. This finding suggests that customers highly value payment systems that reduce transaction effort and allow seamless financial transactions at any time and place. The widespread acceptance of QR-code payments, one-click transactions, and interoperability across banking platforms has made UPI an integral part of consumers' daily purchasing behaviour. This finding is consistent with Chen (2008), who reported that convenience significantly influences consumers' willingness to adopt and continue using mobile payment systems. Likewise, Oliveira et al. (2016) found that convenience and perceived usefulness positively affect customers' behavioural intention toward mobile payment technologies.

The second strongest determinant was **transaction speed**, indicating that consumers prefer businesses that facilitate quick and uninterrupted payment processing. Urban consumers increasingly expect real-time payment confirmation and minimal waiting time during transactions. Faster payment completion not only improves customer satisfaction but also contributes to positive shopping experiences that encourage repeat patronage. This finding supports the observations of Thakur and Srivastava (2014), who concluded that rapid transaction processing enhances users' adoption and continued usage of mobile payment services.

The study further found that **service reliability** positively influences customer retention. Reliable payment platforms reduce transaction failures, payment delays, and technical interruptions, thereby strengthening consumers' confidence in digital payment systems. Consistent payment performance creates trust in merchants as well as payment service providers, ultimately increasing customers' intention to continue purchasing from the same businesses. Similar findings have been reported by Dahlberg et al. (2008), who emphasised the importance of reliable payment infrastructure in sustaining long-term digital payment adoption.

Security also demonstrated a significant positive effect on customer retention. Although consumers

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have become increasingly familiar with digital payments, concerns regarding fraud, privacy, and financial risk remain important. The findings suggest that secure authentication mechanisms, encryption technologies, and consumer protection measures positively influence customers' trust and encourage continued use of UPI-enabled services. This observation aligns with Zhou (2011), who found that perceived security significantly influences users' post-adoption behaviour toward mobile payment systems.

Finally, **ease of use** exhibited a positive and statistically significant relationship with customer retention. Although its influence was comparatively lower than convenience and transaction speed, it remains an important determinant of continued usage. User-friendly interfaces, simplified navigation, and minimal transaction complexity reduce cognitive effort and enhance customers' overall payment experience. This finding is consistent with the Technology Acceptance Model proposed by Davis (1989), which identifies perceived ease of use as a key factor influencing technology acceptance and continued usage behaviour.

Overall, the findings indicate that customer retention in digital payment environments extends beyond technology adoption. Rather, it is strongly influenced by the quality of customers' payment experiences. Businesses that integrate fast, reliable, secure, and convenient UPI payment systems are more likely to improve customer satisfaction and establish long-term customer relationships.

MANAGERIAL IMPLICATIONS

The findings of this study provide several practical implications for payment service providers, banks, retailers, e-commerce platforms, and policymakers seeking to strengthen customer retention through digital payment technologies.

First, businesses should prioritise **payment convenience** by integrating multiple UPI-enabled applications into their payment infrastructure. Providing customers with flexibility to choose their preferred payment application can significantly improve transaction experiences and reduce payment-related barriers.

Second, organisations should continuously improve **transaction speed** by investing in reliable digital infrastructure capable of processing payments efficiently during peak business hours. Faster transaction processing enhances operational efficiency while reducing customer waiting time, thereby improving overall service quality.

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Third, payment service providers should strengthen **security mechanisms** by implementing advanced authentication technologies, fraud detection systems, biometric verification, and real-time transaction monitoring. Increasing customer awareness regarding safe digital payment practices can further enhance trust in UPI payment systems.

Fourth, businesses should focus on improving **service reliability** by minimising transaction failures, reducing payment downtime, and ensuring uninterrupted payment services. Reliable payment performance contributes directly to customer confidence and long-term customer retention.

Fifth, organisations should design **user-friendly payment interfaces** that simplify the payment process for users across different age groups and technological backgrounds. Clear navigation, intuitive application design, and simplified payment procedures can increase customer satisfaction and encourage continued usage.

Finally, policymakers and financial institutions should continue promoting digital financial literacy programmes that educate consumers about the benefits, security features, and responsible use of UPI payment systems. Such initiatives can strengthen public confidence in digital payments and support the continued expansion of India's digital economy.

CONCLUSION

The rapid growth of digital payment technologies has fundamentally transformed consumer purchasing behaviour in India, with the Unified Payments Interface (UPI) emerging as one of the country's most successful financial innovations. The present study examined the impact of UPI payment attributes on customer retention among urban consumers in Delhi by investigating the influence of ease of use, convenience, transaction speed, security, and service reliability.

The findings demonstrate that all five UPI payment attributes positively contribute to customer retention, highlighting the strategic importance of providing efficient and reliable payment services. Among these factors, convenience and transaction speed exert the strongest influence, indicating that consumers increasingly value payment systems that simplify transactions while saving time. Security and service reliability further enhance customer confidence by reducing perceived financial risk and improving transaction consistency. Ease of use also contributes positively by reducing technological complexity and encouraging continued usage of UPI-enabled payment platforms.

The study contributes to the growing literature on digital payment systems by extending previous research beyond technology adoption and examining customer retention as a behavioural outcome. The

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findings suggest that businesses should view payment systems not merely as transaction mechanisms but as important components of customer relationship management strategies. Investing in secure, convenient, reliable, and user-friendly digital payment infrastructure can strengthen customer satisfaction, encourage repeat purchases, and improve long-term customer loyalty.

Despite its contributions, the study has certain limitations. The research focused exclusively on urban consumers in Delhi and employed convenience sampling, which may limit the generalisability of the findings. Future studies may include respondents from rural and semi-urban regions, compare different digital payment platforms, or investigate additional behavioural constructs such as customer trust, perceived value, habit, and switching intentions. Comparative studies across different demographic groups and longitudinal research designs may further enhance understanding of customer retention in India's evolving digital payment ecosystem.

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***Author for Correspondence**

Kiran

E-mail: kiranchawlaphd@gmail.com

[1]Assistant Professor, Department of Commerce, NCWEB, University of Delhi

[2]Assistant Professor, Department of Economics, NCWEB, University of Delhi

[3]Assistant Professor, Department of Commerce, NCWEB, University of Delhi

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