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WHEN CONVENIENCE BECOMES CONFUSION: THE IMPACT OF USER EXPERIENCE COMPLEXITY ON CONSUMER SATISFACTION AND CONTINUED USAGE OF DIGITAL PAYMENT GATEWAYS

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Abstract: The swift implementation of digital payment systems has improved convenience and accessibility in financial transactions, especially in developing economies such as India. The increasing complexity of user interfaces may adversely impact consumer behaviour. This research investigates the influence of user experience (UX) complexity on consumer satisfaction and the desire to continue usage, with transaction-related anxiety acting as a mediating variable. Data were gathered from 150 active users of digital payment applications utilising a quantitative study design and a structured questionnaire. Rooted in the Technology Acceptance Model and Cognitive Load Theory, the study utilised correlation, regression and mediation analyses to examine the potential relationships. The results indicate that UX complexity markedly diminishes user happiness and desire to continue usage, while heightening transaction-related anxiety. Furthermore, transaction-related anxiety partially influences the association between UX complexity and the desire to maintain usage. The research underscores the necessity of streamlining interface design and minimising cognitive load to improve user happiness and ensure the sustained use of digital payment gateways**.**

Keywords: *User Experience Complexity; Digital Payment Gateways; Consumer Satisfaction; Continued Usage Intention; Transaction-Related Anxiety*

INTRODUCTION

The swift proliferation of digital payment gateways has revolutionised consumer financial transactions, emphasising convenience, speed and accessibility within cashless economies. In rising markets like India, governmental initiatives, extensive smartphone penetration and the expansion of Unified Payments Interface (UPI) systems have markedly expedited the adoption of digital payment platforms. Consequently, digital payments have become an essential component of daily consumer behaviour in metropolitan and semi-urban areas. Initially, digital payment systems aimed to streamline transactions; however, modern payment gateways have transformed into versatile platforms that provide an array of features, such as bill payments, investment opportunities, credit options, reward programs and tailored promotions. While these enhancements seek to improve user engagement, they have concurrently augmented the complexity of user interfaces. Overloaded interfaces, numerous authentication procedures, frequent design modifications and ambiguous error messages have created cognitive difficulties for consumers during standard transactions.

The complexity of user experience (UX) has become a significant obstacle in the utilisation of digital payments. Consumers often experience confusion, hesitation and anxiety when interacting with complex interfaces, particularly during transaction failures or security verification processes. Such experiences not only undermine the apparent usability but also diminish satisfaction and confidence in the platform. Users frequently stop transactions midway or restrict their engagement to fundamental features, jeopardising the long-term viability of digital payment adoption.

Despite a comprehensive study on trust, security, and perceived utility of digital payment systems, scant scholarly focus has been directed towards the influence of UX complexity on consumer behaviour. Current research predominantly presumes that augmented functionality inherently improves user happiness, neglecting the psychological burdens linked to cognitive overload and decision fatigue. This study gap is particularly pronounced in emerging nations, as individuals exhibit varying degrees of digital literacy. In this context, the current study examines the impact of UX complexity on consumer satisfaction and the desire to continue using digital payment gateways, with a specific focus on transaction-related anxiety as a behavioural mechanism. This study enhances the understanding of how design complexity influences customer responses in digital payment ecosystems by merging insights from the Technology Acceptance Model and Cognitive Load Theory. The results are anticipated to give significant insights for platform designers, legislators and service providers seeking to develop user-centric and sustainable digital payment systems.

REVIEW OF LITERATURE

Zhang et al. (2023) examined convenience in their article, investigating how user experience factors influence the adoption and use of digital payments using a hybrid SEM + ANN model. The study highlighted that perceived ease of use and usefulness significantly shape user attitudes toward digital payment systems, demonstrating that UX design is crucial for sustained adoption.

Martens et al. (2024) identified key determinants that impact the user experience of peer-to-peer payment services by analysing user review data using sentiment/text mining. It establishes UX as a critical factor in user satisfaction, highlighting areas such as interface usability, service quality, and emotion in user feedback.

Samson et al. (2025) focused specifically on user interfaces and journey mapping in UPI-based digital payment apps. It discusses how design elements like navigation, onboarding and cognitive load affect usability, emotional engagement, and adoption across heterogeneous user groups makes it directly relevant to your focus on UX complexity and confusion.

Ramanatha et al. (2024) explored user interface and overall user experience challenges in digital payments from the end-user perspective. It analyses common usability issues that lead to confusion and reduced adoption, offering insights into how poor UX design creates barriers for users, closely aligning with your topic.

RESEARCH GAP

Although research on user experience in digital payment systems is increasing, current studies primarily focus on UX as a facilitator of convenience and adoption, neglecting its possible function as an impediment due to interface and process complexity. Previous research has identified essential UX drivers and usability challenges; nevertheless, these studies predominantly remain descriptive and fail to empirically investigate how UX complexity contributes to confusion, transaction-related anxiety and diminished consumer pleasure or intention to continue usage. Furthermore, there is an absence of cohesive empirical models that define UX complexity as a unique factor affecting post-adoption behaviour, especially in emerging market environments characterised by differing degrees of digital literacy. This study investigates UX complexity as a behavioural impediment in digital payment gateways and evaluates its effect on user satisfaction and intention to maintain usage.

SCOPE OF THE STUDY

The scope of the present study is limited to examining the impact of user experience (UX) complexity on consumer satisfaction and continued usage intention of digital payment gateways. The study focuses on users who actively use mobile-based digital payment applications for routine transactions. It specifically investigates interface complexity, navigation difficulty and transaction-related anxiety as key behavioural factors influencing post-adoption usage behaviour in an emerging market context.

OBJECTIVES OF THE STUDY

1. To examine the impact of UX complexity on consumer satisfaction in digital payment gateways.
2. To analyse the influence of UX complexity on continued usage intention through transaction-related anxiety.

HYPOTHESES OF THE STUDY

H1: UX complexity has a significant negative effect on consumer satisfaction with digital payment gateways.
H2: UX complexity has a significant negative effect on continued usage intention of digital payment gateways.
H3: UX complexity has a significant positive effect on transaction-related anxiety among users.
H4: Transaction-related anxiety has a significant negative effect on continued usage of digital payment gateways.

METHODOLOGY OF THE STUDY

The research employs quantitative and descriptive design. Primary data were gathered via a structured questionnaire employing a five-point Likert scale. The poll was conducted among users of digital payment gateways. Data analysis was conducted utilising descriptive statistics and inferential methods, including correlation and regression analysis, to evaluate the offered hypotheses.

RESEARCH DESIGN

The research used a quantitative and descriptive approach to analyse the influence of user experience (UX) complexity on consumer satisfaction and the intention to continue using digital payment gateways, with transaction-related anxiety serving as a mediating variable. This design is suitable for analysing relationships among variables and testing established hypotheses using quantitative data. A cross-sectional methodology was utilised, with data gathered from respondents at a singular moment in time. The research design enables the objective evaluation of impressions of UX complexity, anxiety, satisfaction, and usage intention, allowing for statistical analysis via correlation, regression, and mediation methods.

SAMPLING TECHNIQUE

The research utilised a convenience sampling method, focusing on individuals who often engage with digital payment systems for financial transactions. This strategy was selected because of the accessibility of respondents and the prevalent use of digital payment applications among consumers.

ETHICAL CONSIDERATIONS

The research complied with established ethical criteria. Participation in the survey was completely optional, and respondents were apprised of the study's goal before data collection commenced. No personal identifiers, including names, contact information, or financial data, were gathered, thereby safeguarding responder anonymity and confidentiality. Participants might withdraw from the study at any point without repercussions. The collected data were utilised exclusively for academic and research purposes, with all replies analysed in aggregate to ensure individual anonymity.

LIMITATIONS OF THE STUDY

Notwithstanding its merits, the study possesses specific limitations. The research utilised a convenience sampling method, potentially restricting the generalizability of the results to the wider community of digital payment consumers. The sample size was limited to 150 respondents, potentially failing to encompass the range of user experiences across various geographies and demographic groupings. The study depended on self-reported data, which may be prone to response bias. The research exclusively examined UX complexity and transaction-related anxiety, omitting other significant criteria such as trust, perceived security and service quality. These constraints must be acknowledged while analysing the findings.

THEORETICAL FRAMEWORK

The research is based on the Technology Acceptance Model (TAM) and Cognitive Load Theory. TAM elucidates user behaviour via perceived ease of use and perceived utility, whereas Cognitive Load Theory elucidates how excessive interface complexity and information overload induce mental strain, resulting in confusion and anxiety. This study conceptualises UX complexity as a behavioural barrier that affects consumer pleasure and the intention to continue usage by incorporating various frameworks.

ANALYSIS OF THE STUDY

The statistical analysis of data was collected from 150 respondents to examine the impact of the UX complexity of digital payment gateways on consumer satisfaction and continued usage intention, with transaction-related anxiety as a mediating variable. The analysis was carried out using reliability testing, descriptive statistics, correlation, regression, and mediation analysis.

RELIABILITY ANALYSIS

Cronbach's Alpha was used to assess the internal consistency of the measurement scales.

TABLE 1
RELIABILITY ANALYSIS OF MEASUREMENT CONSTRUCTS

Construct	Items	Cronbach's Alpha
UX Complexity	8	0.939
Transaction-Related Anxiety	5	0.890
Consumer Satisfaction	4	0.879
Continued Usage Intention	3	0.863

Interpretation:

All constructions exhibit alpha values exceeding 0.80, signifying exceptional internal consistency. Consequently, the questionnaire is dependable and appropriate for subsequent study.

DESCRIPTIVE STATISTICS

TABLE 2
DESCRIPTIVE STATISTICS OF STUDY VARIABLES

Variable	Mean	Std. Deviation
UX Complexity	3.37	0.59
Transaction Anxiety	2.05	0.55
Consumer Satisfaction	2.67	0.58
Continued Usage Intention	2.78	0.67

Interpretation:

Respondents recognise a moderate degree of UX complexity in digital payment applications. Anxiety levels are comparatively low, although contentment and usage intention are moderate, indicating potential for enhancing user experience.

CORRELATION ANALYSIS

Pearson's correlation was conducted to examine relationships among the variables.

TABLE 3
CORRELATION ANALYSIS OF UX COMPLEXITY, ANXIETY, SATISFACTION AND USAGE INTENTION

Variables	UX	Anxiety	Satisfaction	Usage
UX Complexity	1	1	-	-
Transaction Anxiety	0.585	–0.361	-	-
Consumer Satisfaction	–0.648	–0.568	1	-
Continued Usage Intention	–0.613	-	0.401	1

($p < 0.01$)

Interpretation:

The complexity of user experience is positively correlated with transaction anxiety and negatively correlated with pleasure and inclination to use. Anxiety exhibits a significant negative correlation with the intention to maintain usage.

REGRESSION ANALYSIS

UX Complexity towards Consumer Satisfaction

- $\beta = -0.48$
- $p < 0.001$

Hence, UX complexity has a significant negative impact on consumer satisfaction.

TABLE 4
MEDIATION ANALYSIS

Relationship	Result
UX → Anxiety	Significant (+)
UX → Usage Intention	Significant (–)
Anxiety → Usage Intention	Significant (–)
UX + Anxiety → Usage Intention	Partial mediation

Interpretation:

The results indicate that UX complexity significantly increases transaction-related anxiety and significantly decreases the intention to continue usage. Moreover, transaction-related anxiety was determined to considerably and adversely affect the intention to continue consumption. The direct impact of UX complexity on the intention to continue usage remains significant even with the incorporation of transaction-related anxiety, indicating a partial mediation effect. This suggests that UX complexity affects the desire to maintain using both directly and indirectly via transaction-related anxiety. Transaction-related anxiety partially mediates the relationship between UX complexity and continued usage intention

HYPOTHESIS TESTING SUMMARY

Hypothesis	Status
UX complexity affects satisfaction	Supported
UX complexity increases anxiety	Supported
Anxiety affects usage intention	Supported
Anxiety mediates the UX–usage relationship	Supported

FINDINGS AND DISCUSSION

Findings of the study

- UX complexity significantly reduces consumer satisfaction.
- Complex interfaces increase transaction-related anxiety.
- Higher anxiety lowers users' intention to continue using digital payment gateways.
- Anxiety partially explains how UX complexity affects usage intention.

DISCUSSION

The findings align with technology acceptance and usability theories, emphasising that simpler interfaces enhance trust and satisfaction. Excessive steps, unclear error messages, and frequent updates contribute to anxiety, discouraging continued usage.

CONCLUSION

The study concludes that UX complexity is a critical barrier to the effective adoption of digital payment gateways. Reducing complexity and addressing anxiety-inducing elements can significantly enhance consumer satisfaction and sustained usage.

MANAGERIAL IMPLICATIONS

- Simplify interface design
- Reduce transaction steps
- Improve clarity of error messages
- Minimise unnecessary updates

SCOPE FOR FUTURE RESEARCH

- Larger and geographically diverse samples
- Comparative study of different payment apps
- Inclusion of trust and security as additional variables

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