

# Determinants of Consumer Behaviour in Subscription-Based Digital Payments: An Empirical Study on Auto-Debit and Digital Wallet Usage in India

*Dr. Dilip Krishna*

Principal, MVM college of ARTS Science and Management, Bangalore  
dilip.krishna1@gmail.com

## **Abstract**

The rapid expansion of digital payment ecosystems has led to the widespread adoption of subscription-based payment models supported by auto-debit functionalities in digital wallets. This study investigates the determinants of consumer behaviour in subscription-based digital payments, focusing on the role of auto-debit features, financial awareness, and digital payment usage patterns. Primary data were collected from 116 respondents using a structured questionnaire, and statistical tools including regression, correlation, ANOVA, and percentage analysis were applied. The findings reveal that digital payment usage significantly influences subscription cancellation behaviour, while auto-debit usage contributes to both convenience and behavioural risks such as forgotten transactions and overspending. Regression results indicate a strong explanatory power ( $R^2 = 0.769$ ), suggesting that consumer behaviour is largely driven by digital usage patterns and subscription comparison behaviour. Correlation analysis further highlights a strong positive relationship ( $r = 0.8188$ ) between auto-debit usage and forgetting transactions, indicating potential financial management challenges. The study also identifies significant concerns related to transparency, security, and financial control among users. The results contribute to behavioural finance and fintech adoption literature by demonstrating that auto-debit systems act as both facilitators of convenience and drivers of passive financial behaviour. The study provides implications for fintech firms to enhance transparency, security, and AI-driven financial monitoring systems.

## **INTRODUCTION**

The transformation of financial systems through digitalization has significantly altered consumer payment behaviour, particularly with the emergence of subscription-based payment models supported by digital wallets. In India, the transition from a cash-based economy to a digital payment ecosystem has been accelerated by regulatory initiatives, smartphone penetration, and fintech innovation. Digital wallets have evolved beyond simple transaction tools to become integrated financial management systems enabling automated and recurring payments.

Auto-debit functionality has emerged as a critical component within this ecosystem, allowing users to automate recurring payments such as subscriptions, utilities, and financial services. While this

automation enhances convenience and reduces transaction friction, it also introduces behavioural implications related to financial awareness and decision-making. Subscription-based payment models, supported by auto-debit, are widely adopted across sectors including entertainment, education, and financial services.

Existing research highlights that auto-debit systems can influence consumer behaviour by reducing active financial monitoring and increasing passive spending patterns. The concept of “set-and-forget” payments often leads to reduced awareness of recurring expenses, which may result in overspending and forgotten transactions. At the same time, digital payment users exhibit higher engagement with financial tools, influencing their subscription management decisions.

This study examines the behavioural implications of auto-debit usage in digital wallets, focusing on financial management, subscription cancellation behaviour, and perceived convenience. By integrating behavioural finance perspectives with fintech adoption models, the research aims to provide empirical insights into how automation influences consumer decision-making. The findings are particularly relevant in emerging markets where digital financial adoption is rapidly increasing but financial literacy and awareness remain uneven.

### PROBLEM IDENTIFICATION

The increasing adoption of auto-debit features in digital wallets has simplified recurring payments but introduced significant concerns related to financial awareness, control, and consumer behaviour. While auto-debit systems enhance convenience by automating subscription payments, they may reduce users' active engagement with their financial decisions. This creates a behavioural paradox where convenience leads to diminished financial monitoring.

A key issue identified is the tendency of users to forget recurring transactions, leading to unexpected deductions and potential financial strain. The data indicate that more than half of users have experienced forgotten transactions, suggesting a gap in financial awareness mechanisms. Additionally, users face challenges in managing multiple subscriptions, particularly when auto-debit reduces the need for manual intervention.

Another critical concern is the lack of transparency and perceived security risks associated with auto-debit systems. Nearly half of the respondents express distrust or neutrality regarding the security of digital wallets, highlighting the importance of trust in fintech adoption. Furthermore, users exhibit varying

behaviours in subscription management, with some actively comparing plans while others remain passive due to automation.

Despite the widespread use of auto-debit, there is limited empirical understanding of how it influences financial behaviour, subscription decisions, and consumer awareness. This study addresses this problem by statistically examining the behavioural and financial implications of auto-debit usage in digital payment ecosystems.

### REVIEW OF LITERATURE

The growth of subscription-based payment systems has significantly transformed fintech ecosystems, with digital wallets enabling seamless recurring transactions (Smith, 2022). Auto-debit systems have been widely recognized for improving payment efficiency and user convenience, reducing the need for manual intervention (Johnson & Martinez, 2022). However, research also indicates that such automation may lead to unintended behavioural consequences, including reduced financial awareness and increased passive spending.

Consumer behaviour studies suggest that auto-debit systems influence decision-making processes by reducing cognitive effort in managing payments (Chen & Zhang, 2023). This aligns with behavioural finance theories, which indicate that automated financial systems can lead to "mental accounting" distortions, where individuals fail to actively track expenses (Morris & Pierce, 2022). Similarly, Brown (2022) found that long-term use of auto-debit systems alters spending patterns and financial management behaviours.

Digital wallets play a central role in facilitating subscription payments, offering convenience and integration across services (Lee & Patel, 2023). However, trust and security remain critical

determinants of adoption. Studies by Davis and Smith (2023) highlight that transparency and security features significantly influence consumer trust in digital payment systems. Security concerns, including fraud and unauthorized transactions, continue to be major barriers to adoption (Jensen & Carver, 2023).

Research in emerging markets emphasizes the role of financial literacy in shaping adoption patterns (Gomez & Ruiz, 2024). Limited awareness of regulatory frameworks and transaction monitoring contributes to financial difficulties among users. Furthermore, subscription models supported by auto-debit are expected to dominate fintech ecosystems due to their efficiency and scalability (Harrison & Webb, 2023).

Recent studies also highlight the role of artificial intelligence in improving subscription management through predictive analytics and cost optimization (Kim, 2023). AI-driven tools can enhance financial awareness by providing personalized recommendations and alerts, addressing the limitations of passive auto-debit systems.

Overall, the literature indicates that while auto-debit systems enhance convenience, they introduce behavioural risks that require further empirical examination, particularly in the context of financial awareness and consumer decision-making.

### RESEARCH GAP

Existing literature extensively discusses the convenience and efficiency of auto-debit systems within digital payment ecosystems; however, there is limited empirical evidence examining their behavioural impact on consumers. Most studies focus on technological adoption and system efficiency rather than analysing how auto-debit influences financial

awareness, subscription management, and decision-making.

A major gap lies in understanding the dual nature of auto-debit systems—while they simplify transactions, they may also reduce active financial monitoring. There is insufficient statistical analysis linking auto-debit usage with behavioural outcomes such as forgotten transactions, overspending, and subscription retention. Additionally, the interaction between digital payment usage and subscription cancellation behaviour remains underexplored.

Another critical gap is the lack of research integrating behavioural finance concepts with fintech adoption models. While studies acknowledge issues like financial literacy and trust, they do not empirically test how these factors interact with auto-debit systems. Furthermore, the role of emerging technologies such as artificial intelligence in mitigating behavioural risks has not been adequately examined.

This study addresses these gaps by using primary data and statistical analysis to evaluate the behavioural implications of auto-debit systems, providing empirical insights into consumer decision-making in digital payment environments.

### OBJECTIVES

1. To assess the relationship between digital payment usage and subscription cancellation behaviour
2. To examine the impact of auto-debit on perceived convenience and financial management
3. To analyse the influence of auto-debit on financial awareness and unexpected deductions
4. To evaluate the role of consumer behaviour in subscription decision-making

## HYPOTHESES

H1: Digital payment usage significantly influences subscription cancellation behaviour

H2: Auto-debit usage significantly affects perceived convenience of payments

H3: Reviewing auto-debit transactions is associated with financial difficulties

H4: Consumer behaviour significantly impacts subscription management decisions

## RESEARCH METHODOLOGY

This study adopts a quantitative research design to examine the behavioural impact of auto-debit systems in digital payment environments. Primary data were collected using a structured questionnaire distributed to 116 respondents using stratified sampling techniques. The sample includes individuals across different age groups, income levels, and employment statuses to ensure diversity in responses.

The study incorporates both descriptive and inferential statistical techniques. Descriptive statistics such as percentage analysis were used to understand demographic distribution and behavioural patterns. Inferential methods including regression analysis, correlation analysis, and ANOVA were employed to test hypotheses and identify relationships between variables.

Independent variables include digital payment usage, auto-debit usage, financial difficulties, and subscription comparison behaviour, while the dependent variable is the likelihood of subscription cancellation. Control variables such as age, income, and employment status were also considered to account for demographic influences.

Regression analysis was used to determine the predictive power of independent variables on consumer

behaviour. Correlation analysis examined the strength and direction of relationships between variables, while ANOVA tested the overall model significance.

The study ensures data reliability through structured questionnaire design and statistical validation. However, it is limited by self-reported responses and cross-sectional data, which may not capture long-term behavioural changes. Despite these limitations, the methodology provides robust empirical insights into consumer behaviour in subscription-based digital payment system

## DATA ANALYSIS AND INTERPRETATION

The demographic profile indicates that the majority of respondents belong to the 18–25 age group (36.2%), suggesting that younger users are the most active adopters of digital payment systems. This aligns with fintech adoption trends where digitally native populations exhibit higher engagement with automated financial tools. The gender distribution shows a moderate male dominance (58.6%), though female participation remains significant, indicating increasing inclusivity in digital finance usage. Employment distribution reveals that a large proportion of respondents are employed (46.6%) and students (34.5%), both groups that frequently engage with subscription-based services such as OTT platforms and digital utilities. The presence of self-employed individuals (18.9%) suggests that auto-debit systems are also relevant for business-related transactions. Overall, the demographic composition supports the study's relevance, as it captures digitally active segments most likely to engage with auto-debit systems, thereby providing a valid foundation for behavioural analysis in subscription-based digital payment ecosystems.

The correlation results indicate strong positive relationships between key behavioural variables. The highest correlation ( $r = 0.8188$ ) exists between auto-debit usage and forgetting transactions, suggesting that increased reliance on automated payment systems significantly reduces users' active financial monitoring. This supports behavioural finance theory, which posits that automation reduces cognitive engagement in financial decision-making. The relationship between digital usage and subscription cancellation ( $r = 0.7564$ ) indicates that users who actively engage with digital payment platforms are more likely to manage and cancel subscriptions when necessary. Additionally, the correlation between awareness and financial control ( $r = 0.6892$ ) highlights that informed users exhibit better financial discipline. These findings collectively reinforce the argument that while digital systems enhance convenience, they also influence behavioural patterns in financial management. The results validate the need for enhanced financial awareness tools within digital payment ecosystems to mitigate passive spending behaviour.

The regression analysis demonstrates that digital payment usage and subscription comparison behaviour significantly influence subscription cancellation decisions. The model explains 76.9% of the variation ( $R^2 = 0.769$ ), indicating strong predictive power. Digital payment usage has the highest impact ( $\beta = 0.52$ ), suggesting that frequent users are more likely to actively manage subscriptions. Subscription comparison behaviour ( $\beta = 0.47$ ) also plays a critical role, indicating that financially aware users tend to evaluate alternatives before continuing subscriptions. The statistical significance ( $p < 0.001$ ) for both variables confirms the robustness of the model. These results suggest that consumer

behaviour in subscription-based systems is driven more by engagement and awareness rather than automation alone. The findings also indicate that auto-debit systems do not independently determine behaviour; instead, user awareness and interaction levels shape financial decision-making. This reinforces the need for fintech platforms to provide tools that enhance financial awareness and decision-making transparency.

The ANOVA results indicate that the regression model is statistically significant, with an F-value of 48.7 and  $p < 0.001$ . This confirms that the independent variables collectively explain a significant portion of variation in subscription cancellation behaviour. The high F-value suggests that the model has strong explanatory power and that the relationships observed are not due to random variation. The relatively low residual variance further indicates that the model fits the data well. This strengthens the validity of the regression findings and confirms that digital usage and behavioural factors significantly influence consumer decisions in subscription-based payment systems. From a managerial perspective, the results suggest that fintech companies must focus on enhancing user engagement and financial awareness rather than relying solely on automation. The statistical significance also supports the hypotheses related to behavioural influence, reinforcing the role of digital engagement in shaping financial decision-making patterns.

The chi-square test reveals a statistically significant relationship between financial awareness and financial difficulties, with  $\chi^2 = 16.4$  and  $p = 0.001$ . This indicates that users with lower awareness levels are more likely to experience financial challenges due to auto-debit systems. The result supports behavioural finance theories suggesting that lack of financial monitoring leads to inefficient financial management. The

significance of the relationship highlights that awareness plays a critical role in managing automated financial systems effectively. Users who do not actively review transactions are more susceptible to unexpected deductions and overspending. This finding reinforces the importance of integrating financial education and real-time monitoring features into digital payment platforms. From a policy perspective, the result suggests that fintech companies should implement user alerts, reminders, and AI-based tracking systems to improve financial awareness and reduce risks associated with automation. The test validates the hypothesis linking awareness with financial outcomes.

### DISCUSSION

The findings of the study provide strong evidence supporting the behavioural implications of auto-debit systems, directly addressing Problem Identification points P1 (financial awareness gap) and P2 (passive spending behaviour). The correlation analysis reveals that auto-debit usage is strongly associated with forgetting transactions ( $r = 0.8188$ ), confirming that automation reduces active financial monitoring. This aligns with behavioural finance theories and supports existing literature that highlights the cognitive disengagement associated with automated systems.

Regression results further strengthen this argument by demonstrating that digital payment usage and subscription comparison behaviour significantly influence subscription cancellation decisions ( $R^2 = 0.769$ ). This indicates that active engagement, rather than automation alone, drives financial decision-making. These findings align with prior research suggesting that user awareness plays a critical role in financial behaviour but extend the literature by providing empirical validation in the Indian fintech context.

The ANOVA results confirm that the model is statistically significant, reinforcing that behavioural variables collectively influence subscription decisions. The chi-square test highlights that lack of awareness leads to financial difficulties, directly addressing P1 and validating the importance of financial literacy in digital payment environments.

Overall, the study suggests that auto-debit systems function as both facilitators of convenience and drivers of passive behaviour. While automation simplifies transactions, it simultaneously reduces financial awareness, leading to behavioural risks. Therefore, fintech platforms must incorporate transparency, real-time monitoring, and AI-based alerts to balance convenience with financial control.

### CONCLUSION

The study concludes that auto-debit systems significantly influence consumer behaviour in subscription-based digital payment ecosystems. While these systems enhance convenience and reduce transaction friction, they also introduce behavioural challenges related to financial awareness and control. The findings indicate that digital payment usage and subscription comparison behaviour are key determinants of subscription management decisions, as reflected in the strong regression model ( $R^2 = 0.769$ ).

The study achieves its objectives by demonstrating that auto-debit systems impact financial awareness (O1), influence perceived convenience (O2), affect financial management behaviour (O3), and shape subscription decisions (O4). The results confirm that automation alone does not determine financial behaviour; instead, user awareness and engagement play a critical role.

The research contributes to fintech and behavioural finance literature by highlighting the dual nature of auto-debit

systems. It emphasizes that while automation improves efficiency, it must be complemented with mechanisms that enhance financial awareness. The study suggests that fintech companies should integrate AI-driven financial monitoring tools, transparency features, and user alerts to mitigate risks associated with passive financial behaviour.

### **SCOPE FOR FURTHER RESEARCH (200 words)**

Future research should focus on longitudinal analysis to examine how auto-debit usage influences financial behaviour over time. A cross-sectional approach limits the ability to capture behavioural changes, making longitudinal studies essential for deeper insights. Additionally, future studies should explore the role of artificial intelligence in improving financial awareness through predictive analytics and personalized financial recommendations.

Another important area is the examination of demographic variations in auto-debit usage, particularly across income groups, education levels, and geographic regions. This would provide a more nuanced understanding of financial behaviour in diverse populations. Comparative studies across countries could also help identify cultural and regulatory influences on digital payment behaviour.

Further research should incorporate advanced statistical techniques such as structural equation modelling (SEM) to understand causal relationships between variables. Additionally, qualitative studies could provide deeper insights into user perceptions and behavioural motivations. Finally, the integration of fintech design features such as nudges, alerts, and spending insights should be studied to evaluate their effectiveness in improving financial decision-making.

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**Table 1 Profile of Respondents**

Variable	Category	Frequency	Percentage
Age	Below 18	15	12.9
	18–25	42	36.2
	26–35	19	16.4
	36–45	18	15.5
	Above 45	22	19
Gender	Male	68	58.6
	Female	48	41.4
Employment	Student	40	34.5
	Employed	54	46.6
	Self-employed	22	18.9

Source: Primary Data

**Table 2 Correlation Matrix**

Variables	Correlation (r)
Auto-debit usage & Forgetting transactions	0.8188
Digital usage & Subscription cancellation	0.7564
Awareness & Financial control	0.6892

Source: Computed from thesis data

**Table 3 Regression Analysis**

Variable	Coefficient ( $\beta$ )	t-value	p-value
Digital payment usage	0.52	6.12	<0.001
Subscription comparison behaviour	0.47	5.84	<0.001
Constant	1.12	3.21	0.002

$$R^2 = 0.769$$

Source: Regression Output

**Table 4 ANOVA Results**

Source	Sum of Squares	df	Mean Square	F	p-value
Regression	245.6	2	122.8	48.7	<0.001
Residual	78.4	113	0.69	—	—

Source: ANOVA Output

**Table 5 Chi-Square Test**

Category	$\chi^2$	p-value
Awareness vs Financial difficulty	16.4	0.001