

The Influence of UPI Dependency on Personal Financial Control: A Quantitative Study of Young Urban Adults

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Abstract: The Unified Payments Interface (UPI) has revolutionized digital payments in India by providing fast, convenient, and cashless transaction facilities. Despite its advantages, excessive dependency on UPI may influence personal financial control and spending behavior. The present study examines the relationship between UPI dependency and personal financial control among young urban adults. The study is based on primary data collected from 250 respondents aged 18–45 years using a structured questionnaire. Statistical tools such as correlation, regression, and moderation analysis were used to test the hypotheses. The findings revealed a significant negative relationship between UPI dependency and financial control, along with increased impulse spending and reduced expense tracking accuracy among frequent users. The study also found that age and income significantly moderate this relationship. The study concludes that while UPI improves transaction convenience and financial accessibility, excessive usage may negatively affect financial discipline and spending awareness.

Keywords: UPI dependency, financial control, Impulse spending, Digital payments, Behavioral finance.

I. Introduction

Background

The Unified Payments Interface (UPI) has fundamentally altered how Indians conduct financial transactions. Launched by the National Payments Corporation of India (NPCI) in 2016, UPI enables instant, interbank money transfers through mobile devices. By 2024, UPI was recording over 500 million daily transactions, representing 57% of all digital transactions in the country. The platform's adoption has been particularly pronounced among young urban adults, with 66% of users' aged 18-25 reporting daily UPI usage. This rapid adoption reflects UPI's transformative potential. Research indicates that digital payment systems have promoted financial inclusion, reduced cash dependency, and simplified household financial management. Users report enhanced convenience, time savings, and improved ability to track transactions through digital records.

However, emerging evidence suggests a darker dimension to this convenience. Scholars have begun documenting associations between digital payment usage and financial mismanagement. A recent study identified "Digital financial mismanagement" and "Financial Negligence" as distinct factors emerging from UPI usage patterns. These findings raise important questions about whether the very features that make UPI attractive—speed, seamlessness, and reduced friction—might inadvertently undermine users' financial control.

The Paradox of Digital Payments

The frictionlessness that characterizes UPI transactions represents a fundamental departure from cash-based payments. Behavioral economists have long recognized the "pain of paying". The psychological discomfort associated with parting with money as a critical mechanism for spending restraint. Physical cash transactions activate this pain through tangible currency exchange, visible wallet depletion, and the cognitive effort of counting money.

Digital payments, by contrast, abstract the exchange process. When payment requires only a scan and a PIN entry, the psychological distance between desire and transaction shrinks dramatically. Financial experts describe this as creating a "dopamine spending loop"—instant gratification without the counterbalancing psychological friction that cash provides. The result may be more frequent transactions, higher overall spending, and reduced awareness of cumulative expenditure.

II. Literature Review

UPI Adoption and Usage Patterns

The rapid diffusion of UPI represents one of the most successful digital payment transformations globally. Between 2021 and 2025, digital transactions grew nearly eleven fold, with UPI accounting for 80% of total digital transactions. The number of banks on the UPI platform increased from 216 in March 2021 to 661 by March 2025, while QR code deployments expanded from 9.3 crore to 65.8 crore. Adoption has been driven by

multiple factors. Research identifies convenience, ease of use, and incentive structures (cashback offers) as primary motivators. The COVID-19 pandemic accelerated this shift, as consumers sought contactless payment alternatives. By 2025, nearly 65% of UPI users reported conducting multiple digital transactions daily.

Qualitative research reveals that UPI has fundamentally transformed banking experiences. Users describe moving from time-consuming bank visits and cash dependency to instant, anytime-anywhere transactions. One participant noted: "Now, I make a variety of payments like school fees, bill payments, recharges, and if I need to order something online from Zomato or Swiggy". This diversification of transaction types represents a significant behavioral shift.

UPI and Financial Empowerment

Contrary to concerns about financial control loss, some research highlights UPI's empowering potential. Studies document increased financial autonomy, particularly among women, who report greater involvement in household financial decisions following UPI adoption. Participants noted: "Before UPI, my husband managed almost all the major financial matters. Now, I help him handle some expenses independently".

UPI has also been associated with enhanced financial literacy. Regular users report learning financial concepts such as credit/debit terminology, QR code functionality, and security practices through repeated engagement with UPI applications. The transaction history feature, in particular, has been valued for enabling expense tracking and promoting financial awareness. As one small business owner observed: "The transaction history helps me to manage it, earlier with cash it was not the case, I had to either remember or write somewhere down".

The Dark Side: Financial Mismanagement and Digital Payments

Despite these benefits, a growing body of research identifies negative behavioral consequences associated with digital payment usage. A recent study employing factor analysis identified three distinct dimensions of UPI-related financial mismanagement: Usage and security awareness, Digital financial mismanagement, and Financial Negligence. Critically, the study found that "financial discipline is just as important as basic financial knowledge when it comes to determining the impact of financial mismanagement".

Other research has documented associations between UPI adoption and increased household spending. One study found that "household spending increased alongside internet penetration," with low and middle-income families benefiting most from digital finance accessibility while potentially experiencing greater spending increases. Similarly, research on e-wallets has shown "a statistically significant positive impact on consumer purchasing patterns". The mechanisms underlying these effects involve reduced transaction friction and diminished psychological accountability. Financial experts explain that "ease of use and the instant nature of digital payments reduce the psychological pain of spending that physical cash provides, leading to more frequent unplanned purchases". This reduction in the "pain of paying" may be particularly consequential for younger users who have grown up with digital payment systems as their primary transaction mode.

The Pain of Paying in Digital Contexts

The "pain of paying" construct, introduced by Prelec and Loewenstein (1998), posits that payment methods differ in their ability to evoke the psychological discomfort that inhibits spending. Cash maximizes this effect through tangible currency exchange and visible wallet depletion. Digital payments, by abstracting the exchange process, attenuate the pain of paying.

Empirical research supports this proposition. Studies comparing cash and digital payment users consistently find higher spending levels and greater impulse purchasing among digital payment users. The effect is sufficiently robust that some consumers deliberately revert to cash-based systems to regain spending control. As one user described: "When I use cash, I keep only a limited amount in my wallet instead of impulsively buying something, I sit with the thought for a while".

Research Gap

Although extensive research has been conducted on the adoption, convenience, security, and financial inclusion aspects of the Unified Payments Interface (UPI), limited studies have empirically examined its behavioral impact on personal financial control among young urban adults. Existing literature primarily focuses on factors influencing UPI adoption, merchant acceptance, fraud prevention, and overall consumer satisfaction, while the psychological and financial consequences of excessive UPI dependency remain underexplored.

Further, previous studies have discussed increased spending behavior associated with digital payments in general, but very few studies specifically investigate how frequent UPI usage affects expense tracking, impulse spending, and perceived financial discipline in the Indian context. The moderating role of demographic

variables such as age and income in shaping the relationship between UPI dependency and financial control has also received insufficient scholarly attention.

Moreover, while the “pain of paying” theory has been widely applied to credit cards and digital wallets, limited empirical evidence exists regarding its applicability to UPI-based instant payment systems. Therefore, this study attempts to fill these gaps by examining the relationship between UPI dependency and personal financial control, along with associated behavioral patterns among young urban adults in India.

III. Objectives

While substantial literature examines UPI adoption drivers, security concerns, and macroeconomic impacts, limited empirical research has investigated the micro-level behavioral consequences of sustained UPI dependency on personal financial control. Existing studies have either focused on merchant perspectives, fraud prevention, or broad consumer behavior trends. The specific mechanisms through which UPI usage patterns translate into financial management outcomes remain underexplored.

1. To measure the level of UPI dependency among young urban adults
2. To analyze the relationship between UPI dependency and financial control
3. To examine whether demographic factors (age, income) moderate this relationship
4. To identify specific behavioral patterns associated with high UPI dependency

IV. Hypotheses

H₁: Higher UPI dependency is associated with lower perceived personal financial control

H₂: Frequent use of UPI for small-value transactions leads to reduced expense tracking accuracy

H₃: UPI's instant payment features increase impulse spending behavior

H₄: Demographic factors (age and income) moderate the relationship between UPI dependency and financial control.

V. Methodology

The present study adopted a quantitative and descriptive research design to examine the relationship between UPI dependency and personal financial control among young urban adults. Both primary and secondary data sources were used for the study. Primary data were collected through a structured questionnaire based on a five-point Likert scale, while secondary data were gathered from research journals, RBI and NPCI reports, books, articles, and authenticated online sources related to digital payments and behavioral finance. The study employed a convenience sampling method, and a total of 250 respondents aged between 18 and 45 years who actively used UPI applications such as Google Pay, PhonePe, and Paytm were selected from urban areas. The questionnaire included items related to UPI dependency, financial control, expense tracking behavior, impulse spending, and demographic factors such as age and income.

The collected data were analyzed using statistical tools including percentage analysis, mean, standard deviation, correlation analysis, regression analysis, and moderation analysis to test the hypotheses and examine the relationship between variables. UPI dependency was treated as the independent variable, while personal financial control was considered the dependent variable. Age and income were used as moderating variables, and behavioral aspects such as impulse spending and expense tracking accuracy were also analyzed. To ensure reliability and validity, questionnaire items were adapted from previous studies and reviewed carefully before final data collection. The scope of the study was limited to young urban adults using UPI-based digital payment systems and focused specifically on the behavioral and financial management consequences of frequent digital payment usage.

VI. Data Analysis & Interpretation

The collected data were systematically analyzed using appropriate statistical tools such as percentage analysis, mean, standard deviation, correlation, regression, and moderation analysis. The analysis and interpretation section presents the findings related to respondents' demographic profile, UPI dependency, financial control, and behavioral patterns associated with digital payment usage.

Table 1: Demographic Profile of Participants (N=250)

Variable	Category	Frequency	Percentage
Age	18-25	126	50.4%
	26-35	88	35.2%
	36-45	36	14.4%
Gender	Male	145	58.0%

	Female	101	40.4%
	Prefer not to say	4	1.6%
Monthly Income	< ₹25,000	44	17.6%
	₹25,000-50,000	96	38.4%
	₹50,001-1,00,000	84	33.6%
	> ₹1,00,000	26	10.4%
UPI Usage	10-30	74	29.6%
	31-60	92	36.8%
	>60	84	33.6%

Table 1 presents the demographic profile of the 250 respondents selected for the study. The majority of participants belonged to the 18–25 age group, accounting for 50.4% of the total respondents, followed by 35.2% in the 26–35 age category and 14.4% in the 36–45 age group. This indicates that younger adults constitute the major segment of active UPI users. In terms of gender distribution, male respondents represented 58.0% of the sample, while females accounted for 40.4%, and 1.6% preferred not to disclose their gender. Regarding monthly income, the largest proportion of respondents (38.4%) earned between ₹25,000 and ₹50,000, followed by 33.6% earning between ₹50,001 and ₹1,00,000. Respondents earning below ₹25,000 constituted 17.6%, whereas only 10.4% reported monthly income above ₹1,00,000. The findings also reveal a high frequency of UPI usage among respondents. About 36.8% of participants used UPI between 31–60 times per month, while 33.6% reported usage exceeding 60 transactions monthly, indicating strong dependency on digital payment systems for regular financial transactions.

Table 2: Descriptive Statistics for Key Variables (N=250)

Variable	Mean	Median	SD	Min	Max	Skewness
UPI Dependency Score	29.7	30	4.2	16	40	-0.31
Financial Control Score	19.2	19	5.8	8	38	+0.42
Impulse Behavior Score	3.7	4	1.3	0	5	-0.68
Digital Confidence Score	15.8	16	2.1	8	20	-0.19

Table 2 presents the descriptive statistics for the major variables examined in the study, namely UPI dependency, financial control, impulse behavior, and digital confidence among respondents. The mean UPI Dependency Score was 29.7 with a median value of 30 and a standard deviation of 4.2, indicating that most respondents showed a relatively high level of dependency on UPI-based payment systems. The minimum and maximum scores ranged from 16 to 40, suggesting variation in usage intensity among participants. The skewness value of -0.31 indicates a slightly negatively skewed distribution, meaning a larger proportion of respondents reported higher dependency levels. The Financial Control Score recorded a mean value of 19.2 and a median of 19, with a comparatively higher standard deviation of 5.8, reflecting noticeable variation in respondents’ ability to manage and control their personal finances. The positive skewness value of +0.42 indicates that some respondents experienced lower levels of financial control compared to the majority. The wide range of scores (8 to 38) further suggests differences in financial management behavior among UPI users.

The Impulse Behavior Score showed a mean of 3.7 with a median value of 4 and a standard deviation of 1.3, indicating that respondents moderately to highly engaged in impulse spending behavior while using digital payment systems. The skewness value of -0.68 reveals a negatively skewed distribution, implying that many respondents reported higher impulse buying tendencies. This finding supports the idea that instant digital payments may encourage unplanned spending behavior.

Similarly, the Digital Confidence Score had a mean value of 15.8 and a median of 16, with a low standard deviation of 2.1, indicating that respondents generally possessed a high and consistent level of confidence in using digital payment technologies. The skewness value of -0.19 suggests that the distribution is nearly symmetrical with a slight tendency toward higher confidence levels. Overall, the descriptive statistics indicate that respondents are highly dependent on UPI systems, possess strong digital confidence, and simultaneously display moderate financial control and increased impulse spending tendencies.

Table 3: Higher UPI dependency is associated with lower perceived personal financial control

Variables	Correlation Coefficient (r)	p-value
UPI Dependency & Financial Control	-0.73	0.001

The correlation analysis revealed a strong negative relationship between UPI dependency and personal financial control ($r = -0.73, p < 0.001$). This indicates that as dependency on UPI transactions increases, the level of perceived financial control among users decreases significantly. Therefore, H_1 is accepted. The findings suggest that excessive reliance on instant digital payment systems may reduce users’ awareness and monitoring of their financial activities.

Table 4: Use of UPI for small-value transactions leads to reduced expense tracking accuracy

Variables	Beta Value	t-value	p-value
Frequency of Small UPI Transactions → Expense Tracking Accuracy	-0.64	-11.28	0.001

The regression analysis shows a significant negative impact of frequent small-value UPI transactions on expense tracking accuracy ($\beta = -0.64, p < 0.001$). The findings indicate that users making frequent low-value digital payments tend to lose track of their daily expenditures. Hence, H_2 is accepted. The frictionless nature of UPI payments may reduce conscious spending awareness and make expense monitoring difficult.

Table 5: UPI's instant payment features increase impulse spending behavior

Variables	Correlation Coefficient (r)	p-value
UPI Dependency & Impulse Spending Behavior	0.69	0.001

The analysis identified a strong positive relationship between UPI dependency and impulse spending behavior ($r = +0.69, p < 0.001$). This implies that users who frequently use UPI systems are more likely to engage in impulsive purchases. Therefore, H_3 is accepted. The instant and effortless payment process appears to encourage spontaneous buying decisions by reducing the psychological “pain of paying.”

Table 6: UPI's instant payment features increase impulse spending behavior

Moderating Variable	Interaction Effect (β)	p-value
Age × UPI Dependency	-0.28	0.002
Income × UPI Dependency	0.24	0.005

The moderation analysis revealed that both age and income significantly influence the relationship between UPI dependency and financial control. Younger respondents showed a stronger negative impact of UPI dependency on financial control compared to older users. Similarly, lower-income respondents experienced greater financial control issues due to excessive UPI usage. Since both moderating effects were statistically significant ($p < 0.05$), H_4 is accepted. The findings suggest that demographic characteristics play an important role in shaping digital payment behavior and financial discipline.

VIII. Conclusion

The present study examined the impact of UPI dependency on personal financial control among young urban adults. The findings revealed that although UPI-based payment systems provide convenience, speed, and ease of transactions, excessive dependency on these platforms may negatively affect financial discipline and spending behavior. The study identified a strong negative relationship between UPI dependency and personal financial control, indicating that frequent digital payment usage reduces users’ ability to monitor and manage their finances effectively.

The results further showed that frequent UPI usage contributes to reduced expense tracking accuracy and increased impulse spending behavior. The instant and frictionless nature of digital payments minimizes the psychological “pain of paying,” thereby encouraging spontaneous and unplanned purchases. The study also found that demographic factors such as age and income significantly moderate this relationship, with younger and lower-income users experiencing greater financial control challenges due to high UPI dependency.

Overall, the study highlights the need for balanced and responsible use of digital payment systems. While UPI has revolutionized India’s payment ecosystem and enhanced financial accessibility, users must develop stronger financial discipline and awareness to avoid negative behavioral consequences. The findings provide useful insights for policymakers, financial educators, and digital payment service providers to design better financial literacy initiatives and responsible digital payment practices.

Future Scope

The present study focused on young urban adults and examined the relationship between UPI dependency and personal financial control. Future research can expand the scope by including rural populations, senior citizens, students, and users from different socio-economic backgrounds to obtain broader insights into digital payment behavior. Comparative studies between urban and rural users or between different digital payment platforms may provide a deeper understanding of financial behavior patterns.

Further studies may also adopt longitudinal research designs to analyze long-term behavioral and financial effects of excessive UPI usage. Researchers can explore additional variables such as financial literacy, psychological factors, saving habits, lifestyle behavior, and self-control in relation to digital payment dependency. Future research may also examine the effectiveness of financial awareness programs and digital spending management tools in improving personal financial discipline among UPI users.

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