

The Economics of Frictionless Transactions: UPI and Consumption Behaviour Among Students in Vijayawada City of Andhra Pradesh

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ABSTRACT

The rapid proliferation of the Unified Payments Interface (UPI) has fundamentally restructured the everyday transactional environment of urban Indian consumers. The present study examines the influence of UPI on consumption behaviour among students in Vijayawada, with special reference to the economics of frictionless transactions and gender-based differences in behavioural response. The study is based on primary data collected from 223 student respondents aged 18 to 25 years, using a structured questionnaire, with the sample comprising 57 per cent female and 43 per cent male respondents. The analysis focuses on the daily frequency of UPI usage, change in average transaction size after UPI adoption, perceived convenience of UPI relative to cash, spending categories most affected by UPI, impact on impulse purchases and awareness of monthly spending compared to the cash era. Descriptive statistical tools such as percentage analysis were used for data interpretation. The findings reveal that students exhibit very high frequency of UPI usage, with a clear shift toward smaller and more frequent transactions, reflecting the reduction of transaction friction. UPI is overwhelmingly perceived as more convenient than cash and is associated with substantial increases in impulse purchases, particularly across food, online shopping and entertainment categories. A meaningful share of respondents report reduced awareness of their total monthly spending compared to the cash era, indicating a measurable decoupling effect. Female respondents demonstrate stronger expression of these patterns. The study concludes that UPI functions not merely as a payment infrastructure but as a behavioural environment that systematically alters student consumption through the elimination of transactional friction.

Keywords: UPI, Frictionless Transactions, Consumption Behaviour, Pain of Paying, Impulse Purchases, Students

At the global level, the financial landscape has been transformed by the rapid emergence of real-time, instant payment systems that minimise the friction associated with traditional transaction methods. Across the world, instant payment infrastructures such as Pix in Brazil, FedNow in the United States, Faster Payments in the United Kingdom and SEPA Instant in the European Union have redefined the speed, scale and behavioural texture of everyday consumer transactions. These systems eliminate intermediate procedural steps, settle payments in seconds and operate continuously, dissolving the traditional separation between intent to purchase and actual payment. As these infrastructures mature, they shift the underlying economics of consumption by reducing the cognitive, temporal and procedural friction that previously moderated everyday spending decisions.

In India, the Unified Payments Interface (UPI), launched in April 2016 by the National Payments Corporation of India, represents one of the most successful examples of a frictionless retail payment infrastructure globally. UPI enables real-time, interoperable, twenty-four-hour person-to-person and person-to-merchant transfers with zero merchant discount rates, requiring nothing more than a smartphone, a bank account and a virtual payment address. Within less than a decade, UPI has scaled from a niche product to a system that processes billions of transactions monthly, with widespread adoption across urban, semi-urban and rural India. Policy initiatives such as Digital India, the demonetisation exercise of 2016 and the digital acceleration during the COVID-19 pandemic substantially expanded UPI adoption, particularly among young and digitally fluent consumers.

The transition from physical cash to UPI represents a structural shift in the behavioural anatomy of consumer transactions. Cash transactions involve tangible handling of currency, the visible depletion of a wallet and the cognitive friction of counting and providing change, each of which serves as an implicit checkpoint in spending decisions. UPI, by contrast, dissolves these checkpoints into a single tap-and-confirm action that takes seconds. This compression has implications well beyond convenience: it reduces what behavioural economists describe as the “pain of paying” and weakens the perceptual link between consumption and the outflow of money. Consequently, transactions become smaller, more frequent and increasingly discretionary, with spending decisions shifting toward immediate gratification rather than deliberative comparison.

Looking ahead, the frictionless transaction environment is likely to deepen further as UPI integrates with credit instruments such as UPI on RuPay credit cards, scales internationally through partnerships with payment systems in Singapore, the UAE, France and other markets and becomes embedded into voice-driven, conversational and biometric interfaces. Emerging features such as in-app payments within social and content platforms, UPI Lite for small-value transactions and AutoPay mandates for recurring expenses further reduce frictional touchpoints in the consumer's daily transactional journey. Simultaneously, concerns regarding overspending, indebtedness, fraud susceptibility and the financial well-being of young and student users are gaining increasing policy and regulatory attention.

The proliferation of UPI has significantly altered consumption behaviour at the household and individual level. Among student populations in urban India, where digital fluency is high, daily transactions are frequent and disposable income is often limited to monthly allowances and part-time earnings, the behavioural consequences of UPI's frictionlessness merit particular attention. Students operate in a context characterised by intense peer interaction, exposure to digitally curated lifestyles and a high share of discretionary consumption in food, entertainment and small-value online purchases. The role of UPI in shaping the frequency, composition, awareness and impulsiveness of student consumption therefore warrants systematic empirical examination at the city level.

Review of Literature

Prelec and Loewenstein (1998) introduced the concept of the “pain of paying” within their mental accounting framework, arguing that the form and timing of payment significantly influence consumer behaviour. The study demonstrates that payment methods which decouple consumption from the act of paying — such as credit cards or prepaid instruments — reduce psychological friction and lead to higher spending compared to cash. The framework provides a foundational lens for understanding why frictionless digital payment systems may amplify consumption.

Soman (2003) empirically examined the effect of payment transparency on consumption through quasi-experimental field studies. The study finds that less transparent payment methods, where the outflow of money is visually or temporally separated from the moment of purchase, significantly increase consumer spending. The findings establish that payment friction is not merely a behavioural inconvenience but a meaningful determinant of consumption levels.

Raghubir and Srivastava (2008) investigated how the form and coupling of payment influence spending behaviour using a series of experimental studies. The results show that payment forms perceived as less akin to “real money” — including gift certificates, cards and electronic forms — lead to consistently higher willingness to spend. The study highlights that payment medium is a behaviourally salient variable in shaping discretionary consumption.

Runnemark, Hedman and Xiao (2015) examined whether consumers pay more using debit cards than cash in a controlled retail setting. The study finds that consumers consistently report higher willingness to pay and demonstrate higher actual spending when using cards, even after controlling for income and product preferences. The findings reinforce the broader behavioural conclusion that elimination of cash friction tends to increase consumption.

Boden, Maier and Wilken (2020) analysed the effect of credit card versus mobile payment on perceived convenience and consumers' willingness to pay. The study finds that mobile payment systems further reduce perceived transaction friction beyond cards, leading to even higher willingness to pay and a greater incidence of impulse purchases. The findings are directly relevant to UPI-style mobile payment systems characterised by minimal interface friction.

Patro (2025) examined the impact of UPI adoption on household financial behaviour in India using a difference-in-differences framework. The study finds that while UPI adoption does not significantly alter formal financial market participation, it is associated with measurable shifts in transaction patterns and savings behaviour. The findings provide an Indian context for assessing the broader economic consequences of UPI-driven consumption.

Tulpule, Dikonda, Aswale, Shaikh and Yadav (2025) examined digital payment gateways and consumer expenditure behaviour in India. The study finds that digital payments increase transaction frequency, purchasing power and impulse buying, while also improving budgeting and financial tracking. It concludes that digital payments produce a dual effect by simultaneously encouraging spending and enabling financial control.

Hussain and Goyel (2025) studied digital payment systems and consumer spending in Greater Noida. The findings reveal widespread adoption among younger and educated users, driven primarily by convenience and cashback offers. The

study notes that digital payments tend to increase spending, with age and education influencing behaviour more strongly than usage frequency alone.

Bhavana and Sivakanni (2025) analysed digital payments and consumer spending habits in the Indian context. The study highlights that while digital payments improve convenience and adoption, they may also encourage impulsive spending. It recommends stronger awareness, security measures and financial literacy initiatives to ensure responsible usage.

Kanwal and Singh (2025) investigated digital payment systems and spending behaviour in urban and semi-urban India. The study finds that digital payments increase spending frequency and discretionary expenditure, driven by convenience and cashback benefits, while financial literacy plays a moderating role in containing overspending tendencies.

Saxena (2025) analysed digital payment adoption and spending behaviour across urban and rural households in India. The study finds higher adoption and increased discretionary spending among urban digital payment users. It highlights the role of financial literacy and infrastructure in ensuring balanced and responsible usage.

Reddy and Rao (2024) examined UPI usage and consumption behaviour among college students in tier-2 cities of Andhra Pradesh and Telangana. The study reports that student users exhibit a high frequency of small-value UPI transactions and significant increases in food, entertainment and impulse-driven spending. The study identifies low spending awareness and weak budgeting practices as key behavioural vulnerabilities among student users.

Statement of the Problem

Despite the rapid and near-universal adoption of UPI in urban India, the behavioural and economic consequences of frictionless transactions on day-to-day consumption among student populations remain inadequately studied at the city level. Most existing literature focuses on aggregate adoption patterns, household-level spending or the macroeconomic implications of digital payments, while comparatively limited attention has been directed toward the micro-behavioural effects of payment friction reduction within specific demographic segments. The question of whether UPI functions merely as a more efficient substitute for cash, or whether it systematically alters the structure, frequency and awareness of consumption, forms the central concern of this study (Prelec and Loewenstein, 1998; Soman, 2003; Tulpule et al., 2025).

The expansion of UPI has fundamentally altered the daily transactional environment of Indian consumers. Its design, characterised by zero merchant discount rates, instantaneous settlement, twenty-four-hour availability and a single-step authentication interface, minimises every procedural and cognitive checkpoint historically associated with cash-based exchange. This compression of transactional friction has implications well beyond convenience. By weakening the perceptual coupling between consumption and payment, UPI alters the salience of spending, the threshold for initiating transactions and the cumulative awareness of monthly expenditure. These effects converge to create what may be termed an economics of frictionless transactions, in which the absence of friction itself becomes a behavioural determinant of consumption levels and patterns.

The behavioural effects of UPI, however, are unlikely to be uniformly distributed across consumer populations. Students represent a particularly relevant group for examining frictionlessness effects, as they typically operate on bounded monthly allowances or limited independent income, exhibit high digital fluency, engage in intensive peer-based transactions and devote a substantial share of consumption to discretionary categories such as food, entertainment and online purchases. Within this group, gender-based variations are expected to exist, given documented differences in spending preferences, social media engagement and consumption priorities. Female and male students may therefore differ in usage frequency, category orientation, impulsiveness and awareness of spending, even within a shared frictionless infrastructure.

In this context, it becomes essential to systematically examine how UPI influences consumption behaviour among student respondents in Vijayawada, with particular attention to gender-based differences. Vijayawada, as a rapidly growing urban centre in Andhra Pradesh with a substantial student population, offers a relevant setting for studying these dynamics. Understanding the manner in which frictionless transactions reshape student consumption is important not only for academic insight into behavioural economics, but also for designing financial literacy programmes, platform-level safeguards and policy interventions that promote responsible use of digital payment systems among young Indians.

Objectives and Methodology

The main objective of the study is to examine the influence of UPI on consumption behaviour among student respondents in Vijayawada, with special reference to the economics of frictionless transactions and gender-based differences in usage patterns, transaction characteristics, perceptions, spending categories, impulsiveness and spending awareness.

The study is based on primary data collected from student respondents in Vijayawada city of Andhra Pradesh. A structured questionnaire was used to gather information relating to the daily frequency of UPI usage, change in average transaction size after UPI adoption, perceived convenience of UPI relative to cash, spending categories where UPI most influenced consumption, impact on impulse purchases and awareness of total monthly spending compared to the cash era. The respondents were selected using a stratified random sampling technique and classified into two groups based on gender, namely male and female, to facilitate comparative analysis. Only respondents currently enrolled as students in undergraduate or postgraduate programmes and who reported active use of UPI were considered for the study. The total sample size consists of 223 respondents, comprising 96 male respondents (43 per cent) and 127 female respondents (57 per cent). The data collected were systematically coded, tabulated and analysed using simple percentage analysis to examine distribution patterns and gender-based differences across the variables studied.

Results and Discussion

Frequency of Daily UPI Transactions

Table – 1 presents the distribution of respondents according to their daily frequency of UPI transactions across two gender groups, namely male and female. At the overall level, it is observed that 33.18 per cent of the respondents report 6 to 10 UPI transactions per day, while 25.56 per cent report 11 to 20 transactions and 11.21 per cent report more than 20 transactions daily. About 23.77 per cent report 2 to 5 transactions and only 6.28 per cent report fewer than 2 transactions per day. This indicates that a substantial majority of student respondents conduct multiple UPI transactions every day, reflecting an extremely high level of daily transactional engagement.

Across the strata, it is obvious from the table that with regard to male respondents, 33.33 per cent report 6 to 10 transactions daily, while 26.04 per cent report 2 to 5 transactions and 22.92 per cent report 11 to 20 transactions. About 9.38 per cent report more than 20 transactions and only 8.33 per cent report fewer than 2 transactions per day. In the case of female respondents, 33.07 per cent report 6 to 10 transactions, followed by a notably higher 27.56 per cent reporting 11 to 20 transactions and 12.60 per cent reporting more than 20 transactions per day. About 22.05 per cent report 2 to 5 transactions and only 4.72 per cent report fewer than 2 transactions daily. This indicates that female student respondents demonstrate a higher intensity of daily UPI usage compared to their male counterparts, particularly in the higher-frequency categories.

It can be concluded that UPI usage is highly intensive among student respondents, with female respondents exhibiting marginally higher daily transactional engagement than male respondents.

Table – 1

Distribution of the Respondents by Daily Frequency of UPI Transactions

Gender	Less than 2	2–5 times	6–10 times	11–20 times	More than 20	Total
Male	8 (8.33)	25 (26.04)	32 (33.33)	22 (22.92)	9 (9.38)	96 (100.00)
Female	6 (4.72)	28 (22.05)	42 (33.07)	35 (27.56)	16 (12.60)	127 (100.00)
Total	14 (6.28)	53 (23.77)	74 (33.18)	57 (25.56)	25 (11.21)	223 (100.00)

Note: Figures in the parenthesis represent row percentages.

Source: Computed from the Primary Data.

Change in Average Transaction Size after UPI Adoption

Table – 2 presents the opinion of respondents regarding the change in their average transaction size after adopting UPI, classified by gender. On the whole, it is evident from the table that about 34.98 per cent of the respondents report that their average transaction size has become significantly smaller after adopting UPI, while 29.60 per cent report that it has become slightly smaller. About 14.80 per cent report a slight increase, 14.35 per cent report no change and 6.28 per cent report a significant increase. This shows that for a clear majority of student respondents, UPI adoption has been associated with a shift toward smaller-value transactions, consistent with the reduction of transaction friction enabling low-value digital exchanges that were previously deferred or avoided in the cash environment.

Gender wise, it is noticed from the table that among male respondents, 31.25 per cent report significantly smaller transactions and 29.17 per cent report slightly smaller transactions. About 15.62 per cent report no change and 15.63 per cent report slightly larger transactions, while 8.33 per cent report significantly larger transactions. In the case of female respondents, a notably higher 37.80 per cent report significantly smaller transactions and 29.92 per cent report slightly smaller transactions. About 14.17 per cent report slightly larger transactions, 13.39 per cent report no change and only 4.72 per cent report significantly larger transactions. A comparison between the two groups indicates that female respondents exhibit a stronger shift toward smaller-value transactions, while male respondents show a comparatively more dispersed pattern across transaction-size categories.

It can be concluded that UPI adoption is strongly associated with a shift toward smaller-value transactions among student respondents, reflecting the role of reduced friction in enabling micro-transactions that were behaviourally inaccessible in the cash era.

Table – 2

Distribution of the Respondents by Change in Average Transaction Size after UPI Adoption

Gender	Significantly Smaller	Slightly Smaller	Remained the Same	Slightly Larger	Significantly Larger	Total
Male	30 (31.25)	28 (29.17)	15 (15.62)	15 (15.63)	8 (8.33)	96 (100.00)
Female	48 (37.80)	38 (29.92)	17 (13.39)	18 (14.17)	6 (4.72)	127 (100.00)
Total	78 (34.98)	66 (29.60)	32 (14.35)	33 (14.80)	14 (6.27)	223 (100.00)

Note: Figures in the parenthesis represent row percentages.

Source: Computed from the Primary Data.

Perceived Convenience of UPI Relative to Cash

Table – 3 presents the distribution of respondents based on their perception of the convenience of UPI relative to cash transactions, classified by gender. By and large, 64.13 per cent of the respondents perceive UPI as much more convenient than cash, while 26.46 per cent perceive it as somewhat more convenient. About 5.83 per cent consider UPI as offering the same level of convenience as cash, while only 2.69 per cent find it somewhat less convenient and 0.89 per cent find it much less convenient. This clearly indicates that UPI is overwhelmingly perceived as a more convenient transaction method than cash among student respondents.

Among male respondents, 60.42 per cent perceive UPI as much more convenient than cash and 28.12 per cent as somewhat more convenient. About 7.29 per cent consider it equally convenient, 3.13 per cent somewhat less convenient and only 1.04 per cent much less convenient. In the case of female respondents, a higher 66.93 per cent perceive UPI as much more convenient than cash and 25.20 per cent as somewhat more convenient. Only 4.72 per cent consider it equally convenient, 2.36 per cent somewhat less convenient and 0.79 per cent much less convenient. A comparison between the two groups reveals that female respondents express a marginally stronger preference for UPI in terms of perceived convenience.

It can be concluded that UPI is widely perceived as substantially more convenient than cash by student respondents across both gender groups, with female respondents exhibiting slightly stronger conviction in this perception.

Table – 3

Distribution of the Respondents by Perceived Convenience of UPI Relative to Cash

Gender	Much More Convenient	Somewhat More Convenient	Same as Cash	Somewhat Less Convenient	Much Less Convenient	Total
Male	58 (60.42)	27 (28.12)	7 (7.29)	3 (3.13)	1 (1.04)	96 (100.00)
Female	85 (66.93)	32 (25.20)	6 (4.72)	3 (2.36)	1 (0.79)	127 (100.00)
Total	143 (64.13)	59 (26.46)	13 (5.83)	6 (2.69)	2 (0.89)	223 (100.00)

Note: Figures in the parenthesis represent row percentages.

Source: Computed from the Primary Data.

Spending Categories where UPI has Most Increased Consumption

Table – 4 presents the distribution of respondents based on the spending categories where UPI has most increased their consumption. On the whole, 31.39 per cent of the respondents report that UPI has most increased their consumption in food and beverages, followed by 26.91 per cent for online shopping and 17.94 per cent for entertainment and subscriptions. About 14.80 per cent report peer-to-peer transfers and 8.96 per cent report transport and mobility as the most affected category. This indicates that UPI's effect on consumption is concentrated in discretionary and high-frequency micro-spending categories rather than essential or planned expenditure.

Among male respondents, 29.17 per cent report food and beverages as the most affected category, followed by 22.92 per cent for online shopping and 18.75 per cent for entertainment and subscriptions. About 16.67 per cent report peer-to-peer transfers and 12.49 per cent transport and mobility. In the case of female respondents, a higher 33.07 per cent report food and beverages and a notably higher 29.92 per cent report online shopping as the most affected category. About 17.32 per cent report entertainment and subscriptions, 13.39 per cent peer-to-peer transfers and 6.30 per cent transport and mobility. A comparison between the two groups reveals that female respondents are more strongly concentrated in food and online shopping categories, while male respondents exhibit a comparatively broader distribution across food, peer transfers and mobility.

It can be concluded that UPI-driven consumption increases are concentrated in discretionary, frequent-purchase categories, with food and online shopping emerging as the most affected segments, particularly among female respondents.

Table – 4

Distribution of the Respondents by Spending Categories where UPI has Most Increased Consumption

Gender	Food & Beverages	Online Shopping	Entertainment & Subscriptions	Peer-to-Peer Transfers	Transport & Mobility	Total
Male	28 (29.17)	22 (22.92)	18 (18.75)	16 (16.67)	12 (12.49)	96 (100.00)
Female	42 (33.07)	38 (29.92)	22 (17.32)	17 (13.39)	8 (6.30)	127 (100.00)

Gender	Food & Beverages	Online Shopping	Entertainment & Subscriptions	Peer-to-Peer Transfers	Transport & Mobility	Total
Total	70 (31.39)	60 (26.91)	40 (17.94)	33 (14.80)	20 (8.96)	223 (100.00)

Note: Figures in the parenthesis represent row percentages.

Source: Computed from the Primary Data.

Impact of UPI on Impulse Purchases

Table – 5 presents the distribution of respondents based on their opinion regarding the impact of UPI on their impulse purchase behaviour. It is revealed from the table that about 39.46 per cent of the respondents report that their impulse purchases have somewhat increased after adopting UPI and 32.74 per cent report that they have greatly increased. About 17.04 per cent report no change, while 7.17 per cent report a slight decrease and 3.59 per cent report a significant decrease. This indicates that a clear majority of student respondents — approximately seven in ten — experience an increase in impulse purchases as a consequence of UPI adoption.

Across the strata, it is noticed that among male respondents, 39.58 per cent report a somewhat increase and 29.17 per cent report a great increase in impulse purchases. About 18.75 per cent report no change, while 8.33 per cent report a slight decrease and 4.17 per cent a significant decrease. In the case of female respondents, 39.37 per cent report a somewhat increase and a notably higher 35.43 per cent report a great increase in impulse purchases. About 15.75 per cent report no change, while only 6.30 per cent report a slight decrease and 3.15 per cent a significant decrease. The comparison reveals that female respondents exhibit a stronger inclination toward increased impulse purchases under UPI, consistent with their higher concentration in smaller transactions and discretionary spending categories observed in earlier tables.

It can be concluded that UPI adoption is strongly associated with increases in impulse purchases among student respondents, with female respondents exhibiting a noticeably higher propensity for such behavioural change.

Table – 5

Distribution of the Respondents by Impact of UPI on Impulse Purchases

Gender	Greatly Increased	Somewhat Increased	No Change	Somewhat Decreased	Greatly Decreased	Total
Male	28 (29.17)	38 (39.58)	18 (18.75)	8 (8.33)	4 (4.17)	96 (100.00)
Female	45 (35.43)	50 (39.37)	20 (15.75)	8 (6.30)	4 (3.15)	127 (100.00)
Total	73 (32.74)	88 (39.46)	38 (17.04)	16 (7.17)	8 (3.59)	223 (100.00)

Note: Figures in the parenthesis represent row percentages.

Source: Computed from the Primary Data.

Awareness of Total Monthly Spending Compared to Cash Era

Table – 6 presents the distribution of respondents based on their perception of awareness of total monthly spending compared to the cash era. Of the sample surveyed, 29.60 per cent of the respondents report being somewhat less aware and 11.66 per cent report being much less aware of their total monthly spending under UPI compared to the cash era. About 25.56 per cent report the same level of awareness, while 21.52 per cent report being somewhat more aware and 11.66 per cent report being much more aware. This indicates that a substantial proportion of student respondents — approximately 41 per cent in total — experience reduced awareness of their total monthly spending under UPI, suggesting a measurable decoupling effect between consumption and the perception of monetary outflow.

Among male respondents, 29.17 per cent report being somewhat less aware and 9.37 per cent much less aware of their monthly spending. About 26.04 per cent report the same level of awareness, while 22.92 per cent report being somewhat more aware and 12.50 per cent much more aware. In the case of female respondents, a higher 29.92 per cent report being somewhat less aware and 13.39 per cent much less aware of their monthly spending. About 25.20 per cent report the same level of awareness, 20.47 per cent report being somewhat more aware and 11.02 per cent much more aware. A comparison between the two groups reveals that female respondents exhibit a marginally stronger pattern of reduced spending awareness compared to male respondents.

It can be concluded that UPI adoption is associated with a noticeable reduction in spending awareness among a significant share of student respondents, with female respondents demonstrating a slightly stronger expression of this decoupling effect.

Table – 6

Distribution of the Respondents by Awareness of Total Monthly Spending Compared to Cash Era

Gender	Much More Aware	Somewhat More Aware	Same Level of Awareness	Somewhat Less Aware	Much Less Aware	Total
Male	12 (12.50)	22 (22.92)	25 (26.04)	28 (29.17)	9 (9.37)	96 (100.00)
Female	14 (11.02)	26 (20.47)	32 (25.20)	38 (29.92)	17 (13.39)	127 (100.00)
Total	26 (11.66)	48 (21.52)	57 (25.56)	66 (29.60)	26 (11.66)	223 (100.00)

Note: Figures in the parenthesis represent row percentages.

Source: Computed from the Primary Data.

Conclusion

The findings reveal that UPI usage is extremely intensive among student respondents in Vijayawada, with the majority conducting multiple transactions every day and a substantial share exceeding ten transactions daily. Female respondents exhibit marginally higher daily transactional engagement than male respondents, particularly in the higher-frequency brackets. This indicates that students operate within an environment of near-continuous low-friction transactional activity, which has important implications for the structure and awareness of their consumption.

Regarding the change in transaction size after UPI adoption, responses indicate a clear and meaningful shift toward smaller-value transactions, with about two-thirds of respondents reporting either significantly or slightly smaller transactions. This pattern is more pronounced among female respondents. The finding suggests that UPI has unlocked a category of micro-transactions that were behaviourally inaccessible under cash conditions, where minimum-value thresholds and the friction of small-change handling discouraged low-value digital exchange.

In terms of perceived convenience, an overwhelming majority of student respondents — exceeding 90 per cent — perceive UPI as more convenient than cash. This near-universal agreement, observed across both gender groups, confirms that UPI is experienced not as one of several available payment options but as a structurally superior interface for daily transactions. This perceived dominance constitutes the behavioural foundation on which the subsequent consumption effects rest.

The study further shows that UPI-driven increases in consumption are concentrated in discretionary and high-frequency micro-spending categories, with food and online shopping emerging as the most affected segments. Male respondents exhibit a comparatively broader distribution across food, peer transfers and mobility, while female respondents are more strongly clustered in food and online shopping. This indicates that UPI functions less as a uniform driver of all consumption and more as a category-specific amplifier of discretionary expenditure.

With respect to impulse purchases, approximately seven in ten student respondents report an increase in impulsive spending after adopting UPI, with female respondents exhibiting a stronger propensity for such change. This finding aligns with the behavioural economics literature on payment friction, which holds that reductions in transactional friction systematically increase the likelihood of unplanned and discretionary spending. The pattern indicates a measurable economic consequence of UPI's frictionlessness on student consumption decisions.

Finally, a notable share of student respondents report reduced awareness of their total monthly spending under UPI compared to the cash era, with female respondents demonstrating a marginally stronger expression of this decoupling effect. Overall, the study concludes that UPI has functioned for student respondents not merely as a faster payment infrastructure, but as a behavioural environment that systematically alters consumption through the elimination of transactional friction. Gender exerts a consistent moderating influence across usage intensity, transaction size, category concentration, impulsiveness and spending awareness, suggesting that the economics of frictionless transactions cannot be adequately understood without accounting for demographic heterogeneity in behavioural response.

It is suggested that financial literacy programmes designed for students should be strengthened to incorporate explicit awareness of payment-friction effects, including the documented tendency for digital payments to weaken the perceptual link between consumption and the outflow of money. Awareness initiatives may particularly target female student users, who exhibit stronger expressions of impulsive and decoupled consumption patterns. UPI applications and digital payment platforms may be encouraged to incorporate behavioural safeguards such as periodic spending summaries, category-level budgeting tools and configurable transaction-confirmation prompts that reintroduce minimal friction at user discretion. Higher education institutions can integrate personal finance and behavioural economics content into core or elective coursework to equip students with frameworks for understanding their own consumption behaviour. Regulatory consideration may also be given to platform-level nudges, such as monthly spending notifications and friction-restoration options for high-value or repeat transactions. Finally, future research may extend the present analysis through income-based segmentation, comparison with non-student populations and longitudinal designs that examine the persistence of decoupling effects over time.

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