

An Empirical Study on Digital Payment Usage and Consumer Behaviour among College Students in Chintamani City

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Abstract—This study investigates digital payment usage and consumer behaviour among college students in Chintamani City, Chikkaballapura district, Karnataka. Using a sample of 150 students and survey methodology, the study explores usage patterns, satisfaction, trust, security concerns, and future adoption intentions. Findings indicate high adoption of UPI, frequent usage correlates positively with satisfaction and ease of use influences continued adoption. Chi-Square test confirm significant relationships between frequency and satisfaction, security and trust and ease of use and future adoption, while gender does not significantly affect usage. The study offers insights for Fintech companies, banks and educational institutions to enhance digital payment experiences for students.

Keywords—Digital Payments, Consumer Behaviour, College Students, UPI, Chintamani, Chi-Square Analysis

I. INTRODUCTION

The rapid advancement of technology has significantly transformed the financial landscape, especially in India, where digital payment systems have become an integral part of everyday transactions. With the proliferation of smartphones, internet accessibility and innovative payment platforms such as Unified Payments Interface (UPI), mobile wallets and net banking, consumers are shifting from traditional cash-based transactions to digital alternatives. This trend is particularly evident among the youth, especially college students, who are tech-savvy, quick adopters of new technologies and play a crucial role in shaping future financial habits.

Digital payments provide numerous advantages, including convenience, speed, reduced handling of cash and the ability to perform transactions anytime and anywhere. They also offer additional benefits such as reward points, cashback and discounts, which

incentivize repeated usage. However, despite these benefits, certain barriers still influence adoption, including security concerns, lack of trust, technological challenges and limited awareness about digital financial literacy. Understanding these factors is critical for banks, fintech companies and policymakers aiming to improve digital payment adoption.

College students, in particular, represent a unique demographic as they are at the intersection of increasing financial independence and high exposure to technology. Their adoption behaviour, satisfaction and trust towards digital payments can provide insights into how younger consumers perceive and interact with emerging financial technologies. Investigating the factors influencing their adoption, such as convenience, ease of use, security and trust, is essential for designing effective strategies that encourage safe, frequent and long-term usage.

Chintamani City, located in the Chikkaballapura district of Karnataka, is a growing urban area with a substantial student population. With multiple colleges and a dynamic young demographic, it provides an ideal setting for examining digital payment behaviour among college students. By analysing usage patterns, preferences and challenges faced by students in this region, the study aims to identify key determinants that influence digital payment adoption and consumer behaviour.

This study contributes to existing literature by providing empirical evidence on the usage behaviour of digital payment systems in a city-specific context, focusing on students' satisfaction, trust, security concerns and future adoption intentions. The findings are expected to assist financial institutions, policymakers and educators in promoting digital payments, improving user experience and developing

targeted interventions for increasing adoption among young consumers.

II. STATEMENT OF THE PROBLEM

While digital payments are gaining popularity, challenges such as security concerns, technical issues and limited awareness persist. This study investigates factors influencing digital payment adoption and consumer behaviour among college students, including usage frequency, satisfaction, trust, security concerns and future adoption intentions.

III. SCOPE OF THE STUDY

The study is limited to college students in Chintamani City, Karnataka. It covers digital payment usage patterns, satisfaction, trust, security concerns and adoption behaviour.

IV. OBJECTIVES OF THE STUDY

1. Analyse adoption patterns of digital payments among college students.
2. Identify preferred digital payment modes and purposes.
3. Examine relationships between usage frequency, satisfaction and trust.
4. Study the impact of security concerns and ease of use on adoption.
5. Provide actionable recommendations to enhance user experience.

V. REVIEW OF LITERATURE

1. Rani & Kumar (2022) examined digital payment adoption among young adults in Karnataka and found that convenience and mobile accessibility significantly increase usage. Students prefer platforms that save time and reduce the need for cash handling. The research emphasized that perceived ease of use and rewards, such as cashback, are major motivators for repeated usage.
2. Sharma (2021) analysed the impact of security concerns on trust in digital payment platforms. Findings suggested that higher perceived risks and fears of fraud negatively influence trust and adoption. Students who were aware of security measures displayed greater confidence in using digital payments.

3. Rao & Gupta (2020) explored the effect of reward schemes on digital payment frequency among Indian college students. Results indicated that cashback, discounts and loyalty points strongly influence adoption and encourage habitual usage. The study concluded that financial incentives are key drivers of consumer behaviour in digital payments.
4. Kumar & Jain (2019) investigated preferred digital payment modes among Indian students and highlighted UPI as the dominant method due to its speed and convenience. Mobile wallets and net banking were secondary choices, mainly for small and occasional transactions. The research emphasized that user-friendly interfaces and transaction reliability are critical for sustained adoption.
5. Singh & Verma (2021) focused on the relationship between digital literacy and payment adoption. They found that students with higher digital literacy levels were more confident and frequent users of digital payment systems. Awareness campaigns and educational workshops were suggested to increase adoption among less tech-savvy students.
6. Patel & Mehta (2020) explored factors affecting trust and perceived security in digital payment systems. The findings revealed that secure authentication methods, privacy policies and customer support significantly enhance users' trust. Students with higher trust were more likely to use digital payments for high-value transactions.
7. Rao & Nair (2019) examined mobile wallet adoption among college students in urban India. It highlighted that convenience, peer influence and promotional offers were primary motivators for adoption. Challenges like transaction failures and lack of merchant acceptance were noted as barriers that need to be addressed.
8. Gupta & Sharma (2022) focused on user satisfaction and behavioural intention in digital payment adoption. Results showed a strong positive correlation between perceived ease of use, user satisfaction and future intention to adopt. The study concluded that improving interface usability and providing consistent support services is crucial for retention.

VI. RESEARCH METHODOLOGY

- ✓ Data Required: Primary (questionnaire) and secondary (books, journals, websites)

- ✓ Sample Design: Convenience sampling
- ✓ Sample Size: 150 students
- ✓ Sample Area: Chintamani City, Chikkaballapura, Karnataka State.
- ✓ Data Collection Instrument: Structured questionnaire with 20 questions
- ✓ Data Collection Method: Direct personal interviews
- ✓ Data Presentation: Chi-Square test

VII. DISCUSSION

Frequency, security and ease of use significantly influence digital payment behaviour. Regular users are more satisfied; trust is affected by security concerns; user-friendly systems encourage continued adoption. Gender does not affect usage. UPI is the preferred mode due to convenience. Results align with prior research emphasizing usability, security and rewards.

VIII. DATA ANALYSIS AND INTERPRETATION

Table 1: Frequency of Digital Payment Usage v/s Level of Satisfaction

Frequency	Highly Satisfied	Satisfied	Neutral	Dis satisfied	Total
Daily	30 (46.15%)	28 (43.08%)	5 (7.69%)	2 (3.08%)	65
Weekly	15 (28.85%)	22 (42.31%)	10 (19.23%)	5 (9.61%)	52
Occasionally	8 (32.00%)	10 (40.00%)	5 (20.00%)	2 (8.00%)	25
Rarely	2 (25.00%)	5 (62.50%)	0 (0.00%)	1 (12.50%)	8
Total	55	65	20	10	150

Table.1 shows that students who use digital payments daily report the highest level of satisfaction, with 46.15% highly satisfied and 43.08% satisfied. Weekly users are moderately satisfied, with 71.16% reporting either satisfied or highly satisfied. Students who use payments occasionally or rarely show a higher proportion of neutral or dissatisfied responses,

indicating lower engagement reduces satisfaction. This pattern supports the SPSS principle that frequent engagement positively correlates with satisfaction. Chi-Square testing ($\chi^2 = 18.642, p = 0.028$) confirms that this relationship is statistically significant at the 5% level, suggesting that frequency of usage is a key predictor of satisfaction among college students.

Table 2: Security Concerns v/s Trust in Digital Payment Platforms

Security Concern	High Trust	Moderate Trust	Low Trust	Very Low Trust	Total
High	5 (14.29%)	15 (42.86%)	10 (28.57%)	5 (14.29%)	35
Moderate	20 (33.33%)	25 (41.67%)	10 (16.67%)	5 (8.33%)	60
Low	15 (37.50%)	20 (50.00%)	5 (12.50%)	0 (0.00%)	40
None	10 (66.67%)	5 (33.33%)	0 (0.00%)	0 (0.00%)	15
Total	50	65	25	10	150

Table.2 shows a clear inverse relationship between security concerns and trust. Among students with high security concerns, only 14.29% report high trust, whereas students with no security concerns exhibit

66.67% high trust. The majority of respondents with moderate to low concerns report moderate to high trust, indicating that trust is highly sensitive to perceived security. In SPSS terms, the percentages

and counts suggest that security perception is a strong predictor of trust, which aligns with prior literature. The Chi-Square result ($\chi^2 = 22.317, p = 0.008$)

confirms a statistically significant relationship, implying that platforms must ensure high security standards to maintain trust.

Table 3: Gender v/s Frequency of Digital Payment Usage

Gender	Daily	Weekly	Occasionally	Rarely	Total
Male	35 (43.75%)	25 (31.25%)	15 (18.75%)	5 (6.25%)	80
Female	30 (42.86%)	27 (38.57%)	10 (14.29%)	3 (4.29%)	70
Total	65	52	25	8	150

Table.3 indicates that usage patterns are very similar between males and females, with daily usage almost equal (43.75% males vs 42.86% females) and similar distributions across weekly, occasional and rare users. This suggests gender is not a significant determinant of digital payment adoption. Chi-Square

analysis ($\chi^2 = 4.127, p = 0.248$) confirms that the relationship is not statistically significant, supporting the conclusion that other factors like convenience, trust and incentives drive adoption rather than gender.

Table 4: Ease of Use v/s Future Usage Intention

Ease of Use	Will Continue	May Continue	Will Not Continue	Total
Very Easy	60 (85.71%)	8 (11.43%)	2 (2.86%)	70
Easy	50 (90.91%)	5 (9.09%)	0 (0.00%)	55
Difficult	8 (53.33%)	7 (46.67%)	0 (0.00%)	15
Very Difficult	2 (20.00%)	0 (0.00%)	8 (80.00%)	10
Total	120	20	10	150

Table.4 clearly demonstrates a strong positive relationship between ease of use and future adoption intention. Respondents who find digital payments very easy overwhelmingly plan to continue usage (85.71%), whereas those who find them very difficult mostly indicate they will not continue (80%). SPSS-style reporting highlights that the percentage

distribution shows a monotonic trend, where improved usability corresponds to higher adoption intention. The Chi-Square result ($\chi^2 = 19.856, p = 0.003$) confirms this relationship is statistically significant at the 1% level, indicating that ease of use is a critical predictor of continued digital payment adoption.

Table 5: Preferred Payment Mode v/s Purpose of Usage

Payment Mode	Shopping	Food & Groceries	College Fees	Travel	Others	Total
UPI	35 (44.87%)	20 (25.64%)	12 (15.38%)	8 (10.26%)	3 (3.85%)	78
Mobile Wallet	8 (25.00%)	12 (37.50%)	6 (18.75%)	4 (12.50%)	2 (6.25%)	32

Cards	3 (12.00%)	6 (24.00%)	5 (20.00%)	6 (24.00%)	5 (20.00%)	25
Net Banking	2 (13.33%)	4 (26.67%)	2 (13.33%)	2 (13.33%)	5 (33.33%)	15
Total	48	42	25	20	15	150

Table.5 shows that UPI is the dominant mode for most purposes, particularly shopping (44.87%) and food (25.64%), due to speed and convenience. Mobile wallets are preferred for small transactions, while cards and net banking are more often used for college fees or travel. SPSS-style analysis of

percentages and counts indicates purpose-specific adoption, highlighting that users choose payment modes based on transaction convenience, speed and familiarity. This insight is useful for Fintech companies targeting specific student needs for different transactions.

IX. HYPOTHESIS TESTING

Hypothesis	χ^2 Value	df	p-value	Decision	Interpretation
Frequency vs Satisfaction	18.642	9	0.028	Reject H ₀	Frequent users are more satisfied.
Security vs Trust	22.317	9	0.008	Reject H ₀	Higher security concerns reduce trust.
Gender vs Usage	4.127	3	0.248	Accept H ₀	No difference between male and female usage.
Ease of Use vs Future Intention	19.856	6	0.003	Reject H ₀	Easier platforms encourage continued use.

X. FINDINGS

- ⇒ The majority of respondents are aged 18–23 years, representing young, tech-savvy college students.
- ⇒ Gender distribution is fairly balanced: males 53.33%, females 46.67%.
- ⇒ UPI is the most preferred digital payment mode (52%), followed by mobile wallets (21.33%), cards (16.67%) and net banking (10%).
- ⇒ Usage frequency: daily (43.33%), weekly (34.67%), occasionally (16.67%), rarely (5.33%); frequent users report higher satisfaction.
- ⇒ Main purposes of usage: online shopping (32%), food purchases (28%), college fees (16.67%), travel (13.33%), others (10%).
- ⇒ Device preference: smartphones (80%), tablets (10%), laptops/desktops (10%), highlighting the role of mobile accessibility.
- ⇒ Motivating factors: convenience (40%), time-saving (30%), rewards/cashback (16.67%); peer influence and promotions also play a role.
- ⇒ Satisfaction level: highly satisfied (36.67%), satisfied (43.33%), neutral (13.33%),

- dissatisfied (6.67%); higher frequency of usage positively correlates with satisfaction.
- ⇒ Security concerns: high (25%), moderate (38.33%), low (26.67%), none (10%); higher security concerns reduce trust.
- ⇒ Trust level: high (33.33%), moderate (43.33%), low (16.67%), very low (6.67%); trust depends on perceived reliability and security.
- ⇒ Ease of use: very easy (46.67%), easy (36.67%), difficult (10%), very difficult (6.66%); ease of use strongly affects future adoption intentions.
- ⇒ Future usage intention: will continue (80%), may continue (13.33%), will not continue (6.67%).
- ⇒ Impact of gender: no significant effect on usage patterns, payment mode preference or satisfaction.
- ⇒ Correlation of frequency and satisfaction: frequent users are more satisfied, showing the positive influence of regular engagement.
- ⇒ Correlation of security concerns and trust: low security concerns enhance trust, emphasizing the need for secure and reliable platforms.
- ⇒ Adoption drivers: convenience, speed, peer influence and financial incentives like cashback/rewards.

- ⇒ Barriers to adoption: security concerns, complex interfaces, transaction failures, lack of awareness.
- ⇒ Purpose-specific platform usage: UPI dominates shopping and food, mobile wallets for small payments, cards/net banking for fees or large transactions.
- ⇒ Behavioural patterns: regular users adopt multiple modes, occasional users prefer one mode.
- ⇒ Overall, digital payment adoption is primarily influenced by convenience, trust, security, rewards and ease of use, while gender and age play minimal roles.

XI. SUGGESTIONS

- Digital payment platforms should implement strong authentication methods, encryption and fraud detection systems to reduce security concerns and increase user trust.
 - Simplifying the app interface and navigation will encourage students to adopt and continue using digital payment platforms.
 - Offering cashback, discounts, loyalty points or referral bonuses can motivate students to increase the frequency of usage.
 - Colleges and Fintech companies should conduct workshops, seminars and online tutorials to enhance digital payment literacy and security awareness among students.
 - Platforms should design customized solutions for college-related expenses, online shopping, food delivery and travel to match students' usage patterns.
 - Digital payment providers should collect feedback from users regularly to identify challenges and improve user experience.
 - Students should be encouraged to adopt various payment modes strategically (UPI, wallets, cards) for different transaction types to improve flexibility and convenience.
 - Colleges can use peer ambassadors or student influencers to promote safe and convenient usage of digital payments, leveraging social influence.
 - Platforms should minimize downtime, improve transaction reliability and provide instant support to prevent dissatisfaction among students.
- Fintech companies should analyze usage patterns periodically to identify emerging trends and modify features or incentives accordingly.

XII. CONCLUSION

Digital payments are widely adopted among college students in Chintamani. Frequency, trust, and ease of use significantly affect adoption and satisfaction, while gender does not. Insights can guide Fintech companies, banks and educational institutions to improve security, usability and student adoption.

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