

Impact of UPI-Based Digital Payments on Consumer Buying Behaviour: A Study of Urban Consumers in Nagpur City

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Abstract

The rapid expansion of digital payment infrastructure has changed the way urban consumers make purchases. The Unified Payments Interface (UPI) has become an important digital payment mechanism because of its convenience, speed, accessibility and ease of use. This study examines the impact of UPI-based digital payments on consumer buying behaviour with special reference to urban consumers in Nagpur City. The model empirical analysis considers 200 urban consumers and examines UPI frequency, preferred payment method, monthly spending, impulse buying, online shopping and perceived convenience. The findings indicate that convenience, speed and reduced dependence on cash are major reasons for UPI adoption. The model data also indicate that digital payments may facilitate small-value and unplanned purchases. The study concludes that UPI is not merely a payment mechanism but an important factor associated with changing urban consumption behaviour.

Keywords: UPI, Digital Payments, Consumer Behaviour, Buying Behaviour, Nagpur, Cashless Economy, Digital Banking.

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1. Introduction

Digital transformation has changed banking, retailing and consumer purchasing practices. The Unified Payments Interface allows consumers to make bank-to-bank payments through mobile applications, QR codes and other interfaces. Its simple transaction process has encouraged adoption among students, salaried employees, professionals, traders and other urban consumers.

The growth of UPI is relevant to consumer behaviour because the payment process is quick and does not require physical cash. Consumers can make low-value transactions easily and can respond rapidly to online offers, QR-based retail payments and digital promotions. Nagpur provides a useful urban setting for studying these changes because it has a diverse consumer population and a growing digital commercial environment.

2. Statement of the Problem

Although UPI improves payment convenience, the ease of payment may also influence the psychological and behavioural aspects of purchasing. Consumers may purchase more frequently, make small-value purchases more readily, shop online more often and respond to promotional offers. The present study therefore examines the relationship between UPI-based payments and consumer buying behaviour among urban consumers in Nagpur.

3. Objectives of the Study

- To study the level of UPI usage among urban consumers in Nagpur.
- To identify the major reasons for using UPI-based digital payments.
- To examine the influence of UPI on consumer buying frequency.
- To study whether UPI is associated with impulse buying.
- To examine UPI-related changes in consumer spending patterns.
- To analyse consumer preference for UPI compared with other payment methods.
- To identify problems faced by consumers while using UPI.
- To suggest measures for improving digital-payment awareness and security.

4. Hypotheses

H0: UPI-based digital payments have no significant influence on the buying behaviour of urban consumers in Nagpur City.

H1: UPI-based digital payments have a significant influence on the buying behaviour of urban consumers in Nagpur City.

H02: Frequency of UPI usage is not associated with impulse buying behaviour.

H12: Frequency of UPI usage is associated with impulse buying behaviour.

5. Research Methodology

Research Design: Descriptive and analytical research design.

Study Area: Nagpur City, Maharashtra.

Model Sample Size: 200 urban consumers.

Sampling: Convenience sampling is proposed for the model survey.

Primary Data: Structured questionnaire.

Secondary Data: RBI, NPCI, Government publications, books and journal literature.

Statistical Tools: Percentage analysis, weighted interpretation, Chi-square test, correlation and regression. For the present document, the 200-response dataset is illustrative/model data and should be replaced by verified field responses for actual publication.

6. Demographic Profile

Age Group	Respondents	Percentage
18–25	58	29%
26–35	62	31%
36–45	42	21%
46–55	24	12%
Above 55	14	7%
Total	200	100%

The largest age group in the model sample is 26–35 years, followed by 18–25 years.

Occupation	Respondents	Percentage
Students	42	21%
Salaried employees	68	34%
Business/Self-employed	38	19%
Professionals	28	14%
Homemakers	14	7%
Others	10	5%
Total	200	100%

7. Preferred Mode of Payment

Payment Method	Respondents	Percentage
UPI	142	71%
Cash	30	15%
Debit/Credit Card	18	9%
Mobile Wallet	6	3%
Internet Banking	4	2%
Total	200	100%

Model finding: UPI is the preferred payment method for 71% of respondents. This indicates a strong preference for mobile-based digital payments among the sample.

8. Frequency of UPI Usage

Frequency	Respondents	Percentage
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Multiple times a day	74	37%
Once a day	46	23%
Several times a week	42	21%
Occasionally	28	14%
Rarely	10	5%
Total	200	100%

About 60% of the model respondents use UPI at least once every day.

9. Major Reasons for UPI Usage

Reason	Respondents	Percentage
Convenience	164	82%
Fast transaction	156	78%
No need to carry cash	148	74%
Easy QR payment	136	68%
Cashback/rewards	92	46%
Easy transaction records	84	42%
24×7 availability	78	39%

Multiple responses were permitted. Convenience is the most frequently selected reason.

10. Impact of UPI on Consumer Buying Behaviour

Statement	Agree/Strongly Agree	Percentage
UPI makes purchasing more convenient	174	87%
UPI makes small purchases easier	162	81%
UPI increases purchase frequency	128	64%
UPI encourages online shopping	132	66%
UPI encourages impulse purchases	118	59%
Cashback/rewards influence purchases	108	54%
UPI reduces dependence on cash	176	88%
UPI helps track expenditure	146	73%

11. UPI and Impulse Buying

Response	Respondents	Percentage
Frequently	32	16%
Sometimes	86	43%
Rarely	54	27%
Never	28	14%
Total	200	100%

In the model dataset, 59% of respondents report frequent or occasional impulse buying in the context of digital payment use. This should be interpreted as an association rather than proof that UPI alone causes impulse buying.

12. Monthly UPI Spending

Monthly Spending	Respondents	Percentage
Below ₹5,000	44	22%
₹5,001–₹10,000	62	31%
₹10,001–₹20,000	52	26%
₹20,001–₹30,000	26	13%
Above ₹30,000	16	8%

Total	200	100%
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13. Consumer Perception of UPI

Factor	Mean Score / 5
Convenience	4.42
Speed	4.35
Ease of use	4.28
Availability	4.19
Transaction record	4.01
Security perception	3.78
Cashback/rewards	3.61
Reliability	3.76

Convenience receives the highest model mean score, indicating that ease of use is a central feature of UPI adoption.

14. Problems Faced by Consumers

Problem	Respondents	Percentage
Internet/network failure	96	48%
Failed transactions	62	31%
Fraud/security concerns	54	27%
Merchant-related issues	42	21%
Lack of digital knowledge	26	13%
Difficulty in refund	22	11%

15. Interpretation and Discussion

The model analysis suggests that UPI is strongly associated with convenience-oriented consumer behaviour. Consumers can complete payments rapidly without carrying physical currency. This can lower the practical barrier to small purchases and may support both online and offline consumption. Promotional schemes can add another behavioural incentive. At the same time, transaction failures, network problems and security concerns remain relevant limitations.

UPI should not be treated as the only explanation for changing consumer behaviour. Income, age, occupation, lifestyle, advertising, product availability, discounts and online retail infrastructure also influence purchasing decisions.

16. Major Findings

1. Most people surveyed prefer using UPI over other payment methods.
2. The main reason people use UPI is that it is easy and convenient.
3. Fast payments and not needing to carry cash are also big reasons.
4. It makes paying for small, everyday items much simpler.
5. People who shop online often use UPI to pay.
6. Some users say digital payments lead to unplanned, quick spending.
7. Discounts and cashback deals encourage people to buy more.
8. Users like that UPI keeps a spending history and is available anytime.
9. Failed payments due to network issues are the most common complaint.
10. As more people use UPI, teaching them about online security is essential.

17. Suggestions

- Teach users regularly how to use UPI safely.
- Fix server and network issues so payments stop failing.
- Make it faster and easier to get refunds for failed payments or fraud.
- Remind people to check their spending history and set a monthly budget.

- Help seniors and beginners learn how to use digital payments.
- Teach shopkeepers how to protect their QR codes from scams.
- Encourage people not to overspend just to get discounts or cashback.

18. Conclusion

UPI has become an important component of India's digital payment ecosystem and is closely associated with changing payment and consumption habits. The model Nagpur analysis indicates that convenience, speed, accessibility and reduced dependence on cash are important reasons for adoption. The data also suggest that digital payment can facilitate small-value purchases and may be associated with impulse buying and online shopping. However, UPI is only one factor among many that influence consumer behaviour. Future research using verified field data and stronger statistical techniques can provide more robust evidence.

19. Limitations

- The study is restricted to urban consumers of Nagpur City.
- Consumer behaviour is multidimensional and cannot be explained by payment mode alone.
- Self-reported responses may contain perception bias.
- Digital-payment technology changes rapidly.
- The 200-response dataset in this document is illustrative/model data and is not a claim of an independently conducted survey.

20. Scope for Further Research

- UPI and impulse buying among college students.
- UPI and spending behaviour of salaried employees.
- UPI adoption among senior citizens.
- UPI usage among small retailers in Nagpur.
- Comparison of UPI users and cash-dependent consumers.
- UPI security, trust and financial literacy.
- Comparison of Nagpur with Pune and Mumbai.

21. Questionnaire

Instructions: Please tick (✓) the most appropriate response. The questionnaire is intended for academic research.

No.	Question	Response Options
1	Age	18–25 / 26–35 / 36–45 / 46–55 / Above 55
2	Gender	Male / Female / Other
3	Occupation	Student / Salaried / Business-Self-employed / Professional / Homemaker / Other
4	How frequently do you use UPI?	Multiple times/day / Once/day / Several times/week / Occasionally / Rarely
5	Preferred payment method	UPI / Cash / Debit-Credit Card / Mobile Wallet / Internet Banking
6	Approximate monthly UPI spending	Below ₹5,000 / ₹5,001–₹10,000 / ₹10,001–₹20,000 / ₹20,001–₹30,000 / Above ₹30,000
7	Rate UPI convenience	1 Very Low – 5 Very High
8	Does UPI make small purchases easier?	Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

9	Does UPI increase purchase frequency?	Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree
10	Does UPI encourage impulse buying?	Frequently / Sometimes / Rarely / Never
11	Does UPI encourage online shopping?	Yes / No
12	Do cashback/rewards influence purchases?	Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree
13	Does UPI reduce dependence on cash?	Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree
14	Does UPI help track expenditure?	Yes / No
15	Have you faced network/transaction problems?	Yes / No
16	Are you concerned about UPI fraud/security?	Yes / No
17	How satisfied are you with UPI?	Very Satisfied / Satisfied / Neutral / Dissatisfied / Very Dissatisfied
18	Main reason for UPI use	Convenience / Speed / No cash / QR / Rewards / Records / 24×7
19	Where do you use UPI most?	Retail / Food / Transport / Bills / E-commerce / Other
20	Overall, has UPI changed your buying behaviour?	Significantly / Moderately / Slightly / Not at all

22. SPSS Coding Framework

Variable	Suggested Code
Age	1=18–25, 2=26–35, 3=36–45, 4=46–55, 5=Above 55
UPI Frequency	1=Rarely, 2=Occasionally, 3=Several/week, 4=Once/day, 5=Multiple/day
Preferred Payment	1=UPI, 2=Cash, 3=Card, 4=Wallet, 5=Internet Banking
Monthly Spending	1=<5000, 2=5001–10000, 3=10001–20000, 4=20001–30000, 5=>30000
Convenience	1=Very Low to 5=Very High
Impulse Buying	1=Never, 2=Rarely, 3=Sometimes, 4=Frequently
Online Shopping	0=No, 1=Yes
Network Problem	0=No, 1=Yes
Security Concern	0=No, 1=Yes

23. Suggested Statistical Testing

1. Chi-square test: UPI frequency × overall change in buying behaviour.
2. Chi-square test: Preferred payment × impulse buying.
3. Pearson or Spearman correlation: UPI frequency score × buying-behaviour score.
4. Cronbach's alpha: internal consistency of multi-item Likert-scale questions.
5. Multiple regression: Buying Behaviour Index as dependent variable and UPI frequency, convenience, rewards and trust/security as predictors.

For actual publication, enter the real questionnaire responses into SPSS/Excel and report the obtained test statistic, degrees of freedom, p-value and decision on each hypothesis.

24. References

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25. Researcher's Note

The tables and 200-response dataset included in this document are prepared as an illustrative academic model. They are useful for understanding questionnaire coding, tabulation and analysis. For journal submission, conference presentation, PhD work or any claim of original field research, the researcher should collect and verify actual responses from respondents in Nagpur and replace the model figures accordingly.

26. Diagrams





