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## International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

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# Changing Banking Behaviour in the Digital Era: Examining the Impact of UPI-Based Travel Payments on Traditional Banking usage among Gen Z in India.

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**ABSTRACT:** The emergence of Digital payment methods has revolutionised the practice of financial transactional behaviour in India, particularly through the expansion of the Unified Payments Interface (UPI). The present study aims to explore the role of the UPI system in shaping travel payment behaviour among Gen Z users, incorporating both behavioural survey results and macro-level monetary indicators. For this study, primary data were collected through the administration of a structured questionnaire using Google Form, while secondary data were obtained from official sources on the volume of transactions through the UPI system and the circulation of currency. The study's findings showed that the Gen Z population in India prefers digital payments, primarily driven by the benefits of convenience, speed, and ease of transactions in the digital medium. Moreover, trust is also found to be an important factor that influences the adoption of digital payment systems. The statistical analysis's findings showed that the Gen Z population of India tends to show reduced behaviour towards the use of cash, ATM transactions, and visiting bank branches to make travel transactions through the traditional banking system.

On the macro-level, the results of the statistical analysis revealed that a substantial correlation exists between the expansion of the UPI transaction system and the circulation of currency, which shows that the digital payment system is significantly impacting the traditional monetary system of India. The current study's findings concluded that the adoption of the UPI system of making travel payments reflects the behavioural change of the Gen Z population of India towards the traditional banking system, which also reflects the systemic change that has taken place in the banking system of the country.

**KEYWORDS:** UPI, Digital Payments, Traditional Banking, Generation Z, Currency Circulation

### I. INTRODUCTION

The financial system has seen a major shift with the advent of technology and the application of digital payment methods. The use of conventional banking systems and cash transactions is being supplemented by digital payment systems that offer real-time financial services. As economies are gradually moving towards cashless financial systems, it has become imperative to understand how such shifts are affecting conventional banking systems.

India's financial system has seen a significant shift in the use of digital payment methods. Many initiatives by the government and increased use of technology have led to increased adoption of electronic payment methods across different areas of Indian society. In such financial innovations, Unified Payment Interface (UPI) has revolutionised online transactions by enabling instant bank transfers through mobile devices.

UPI's ease of use and lower transaction costs have made it popular among consumers, especially young consumers. Generation Z, defined as people between 18 and 27 years of age in this study, are a technology-savvy generation and is



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naturally inclined towards using technology-based financial solutions. Generation Z's financial behaviour may have significant implications for the future of banking services.

Expenditure on travel and transport can be used as an example of how Generation Z's financial behaviour may impact banking services. As transactions related to travel and transport involve multiple transactions and are of lower value, they are a good example of how Generation Z's financial behaviour may impact banking services in the future. As Generation Z is increasingly using UPI-based transactions for booking tickets and transport services, it may indicate a shift from cash-based transactions. However, as currency in circulation is still significant, it indicates that Generation Z's financial behaviour may still be supplementing conventional banking systems. This study intends to examine whether Generation Z's financial behaviour in using UPI-based transactions for travel and transport services is impacting conventional banking systems in India.

### II. REVIEW OF LITERATURE

Anirudh and Mehmet (2024) conducted a study to analyse the life cycle of banknotes in India using RBI data. The findings showed that lower denomination notes last around 4–5 years, while higher circulation reduces their lifespan. The study also highlighted the impact of events like demonetization on currency life. It concluded that cash demand remains strong despite the growth of digital payments.

Arpita and Venkata (2022) examined the role of financial inclusion in promoting digital payment adoption. Using panel data from banks, the study found that factors like ATM availability, urbanisation, and banking infrastructure significantly influence UPI usage. It concluded that stronger financial inclusion directly supports the growth of digital payments.

Ahmed and Sur (2023) explored changes in digital banking usage among rural micro, small, and medium enterprises during demonetization and pandemic-related restrictions and found convenience and performance expectancy as significant drivers of digital banking adoption, while trust influenced sustained usage patterns.

Dilawar and Himanshu (2025) analysed the Structure–Conduct–Performance relationship in the Indian banking sector using panel data. According to the study, market concentration increases short-term profitability but has a limited long-term impact due to competition. It concluded that innovation and competitive forces are key to sustained banking performance.

Badak et al. (2023) attributed India's digital payment growth to demonetisation, fintech innovation, and the COVID-19 pandemic. The study highlighted behavioural shifts accelerated by policy and external shocks.

Kolte and Humbe (2020) examined adoption and usage patterns of the UPI/BHIM payment system among students and found widespread acceptance due to ease of use and real-time settlement capabilities. Young consumers preferred third-party applications because of cashback benefits and simplified interfaces, suggesting a gradual shift away from cash-based behaviour.

Mate and Kapdi (2021) observed that contactless payment requirements during COVID-19 increased digital adoption, potentially leading to long-term behavioural change. It noted that income level does not significantly influence user perception. The study concluded that digital banking is increasingly accepted and plays a vital role in modern payment transactions.

Rastogi, Panse, Sharma, and Bhimavarapu (2021) explored the connection between financial inclusion, financial literacy, and UPI adoption. Their study demonstrated that UPI significantly enhances financial literacy and promotes inclusion, with trust playing a mediating role. This highlights digital payments as catalysts for systemic financial transformation.

Sankararaman and Suresh (2021) investigated awareness and satisfaction levels regarding UPI transactions. The study revealed high awareness and preference for UPI, though operational challenges such as connectivity issues were noted.



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Sharma and Bhardwaj (2023) analysed the potential impact of digital currency adoption on traditional banking systems. They concluded that while digital systems improve transaction efficiency, they may simultaneously reduce reliance on conventional banking channels.

Despite extensive research, limited studies integrate behavioural survey data with macroeconomic indicators such as currency circulation. Additionally, travel-related expenditure contexts and Generation Z remain underexplored. This study addresses these gaps by linking behavioural determinants with systemic financial trends.

### III. RESEARCH GAPS

The literature appears to be divided into either the way consumers perceive digital payment systems or the way the volume of transactions increases on a macro level. There have been very few studies that combine behavioural data with national monetary indicators to determine whether the increasing rate of digital payment methods actually translates into a change in the way consumers use traditional banking systems.

Although Gen Z has been a major driver of the shift towards digital payment methods, there hasn't been much investigation into the way Gen Z spends money, especially in areas such as travel and transportation. Paying for travel expenses gives us a glimpse into the way consumers behave, but there has been little empirical evidence to determine the way these micro-level spending habits affect macro-level phenomena such as the flow of currencies.

Although there has been much talk of how elements like trust and usability impact the way consumers behave, there has been little empirical evidence to support these claims as a driver of change in the traditional banking system.

### IV. SCOPE OF THE STUDY

This research focuses on Generation Z, or people between 18 and 27 years of age, residing in urban and India's semi-urban regions and their use of UPI transactions, particularly in relation to travelling and transport expenses, as these are regular transactions that indicate their financial habits.

On a larger scale, the study collates Reserve Bank of India data publications regarding the number of transactions carried out through UPI and currency in circulation on an annual basis. In this study, the quantity of UPI transactions indicates the growth of digital transactions, and currency in circulation indicates the dependence of people on cash transactions.

It must be noted that this study does not aim to evaluate the efficiency of banking transactions in India, but how people are changing and how it reflects their financial trends.

### V. RESEARCH OBJECTIVES

1. To assess the adoption and usage patterns of UPI-based travel payments among Generation Z.
2. To analyse the relationship between UPI transaction growth and traditional cash usage in India.
3. To evaluate the influence of convenience and trust on digital payment adoption among Generation Z.

### VI. RESEARCH METHODOLOGY

#### Research Design

The methodology employed in the study is quantitative, as it incorporates new cross-sectional survey data as well as existing macroeconomic data. It can be both descriptive and analytical, as it examines the behaviour of the people as well as the statistical relationship. This enables the examination of the payment behaviour of the people as well as the general financial patterns.

#### Data Collection

##### Primary Data :

Gathered using a structured Google Form survey distributed among Generation Z respondents. There were 102 answers in all. A five-point Likert scale was used to gauge responses.



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### Secondary Data:

Annual data on UPI transaction volume and currency in circulation were obtained from Reserve Bank of India publications.

### Sampling Method

The research used a convenience sample to obtain its main source of data, using digitally active Gen Z travellers who frequently use UPI in their trips. The research design used in the study was appropriate because it focused on a particular demographic group.

## VII. HYPOTHESIS STATEMENTS

H1: There is no significant relationship between UPI transaction growth and traditional cash usage.

H1: There is a significant relationship between UPI transaction growth and traditional cash usage.

H2: Convenience does not significantly influence UPI adoption.

H2: Convenience significantly influences UPI adoption.

H3: Trust does not significantly influence digital payment adoption .

H3: Trust significantly influences digital payment adoption.

## VIII. DATA ANALYSIS & INTERPRETATION

### Hypothesis 1

H01: There is no significant relationship between UPI transaction growth and traditional cash usage.

H1: There is a significant relationship between UPI transaction growth and traditional cash usage.

Fig 1: UPI Transaction Volume and Currency in Circulation

Year	UPI Volume	Currency Total
2016-17	180	1335234
2017-18	9,152	1829658
2018-19	53,915	2136736
2019-20	1,25,186	2447280
2020-21	2,23,307	2853731
2021-22	4,59,561	3133692
2022-23	8,37,144	3378472
2023-24	13,11,295	3511197
2024-25	18,58,660	3723400

Source: RBI

### Regression Analysis for Hypothesis 1

Linear Regression

Model Fit Measures

Model	R	R <sup>2</sup>
1	0.845	0.714

Note. Models estimated using sample size of N=9



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Model Coefficients - Currency Total

Predictor	Estimate	SE	t	p
Intercept	2.14e+6	207050.614	10.33	<.001
UPI Volume	1.05	0.250	4.18	0.004

Utilising linear regression analysis, the hypothesis is that the number of transactions through the UPI affects currency circulation. The linear regression model shows that the relationship is strong, with  $R = 0.845$  and  $R^2 = 0.714$ , which indicates that the model explains 71.4% of the variation in currency circulation due to the change in the number of transactions through the UPI. The regression coefficient of the model shows that the change in the volume of transactions through the UPI has a significant effect on currency circulation, as the regression coefficient of the model is positive and significant at the 5% level of significance, given that the p-value of the model is 0.004, which is less than the 0.05 level of significance. Moreover, the results show that the change in the volume of transactions through the UPI is significant, given that the model has a high t-value of 4.18.

### Hypothesis Decision (H1)

The alternative hypothesis is accepted, and the null hypothesis is rejected since the model's p-value of 0.004 is less than the significance level of 0.05. It is concluded that the number of transactions through the UPI has a significant effect on the circulation of currency, which supports the hypothesis that the volume of transactions through the UPI affects the circulation of currency.

Fig 2: Demographic Profile of Respondents

Profile of Respondents	Respondents	Percent (%)
Gender	Male	46.1
	Female	53.9
Age	18-21	26.5
	22-24	40.2
	25-27	33.3
Occupation	Student	38.2
	Working Professional	38.2
	Self-Employed	23.5

Primary data was collected through a structured Google Form, which generated 102 responses ready to be analysed. The demographics revealed that there was a slightly greater percentage of women (53.9%) than men (46.1%), suggesting a balanced representation of both genders. The majority of the sample comprised people belonging to the 22-24 years age group (40.2%), followed by the 25-27 years age group (33.3%), indicating active participation from the middle range of Gen Z. Among the occupations, students and working professionals were tied with 38.2% each, followed by self-employed individuals with 23.5%.



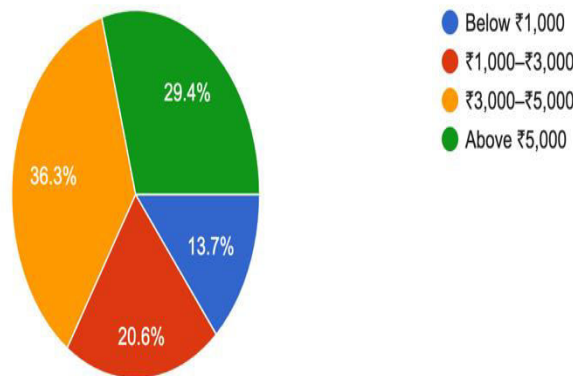
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Fig 3: Graph shows the Average Monthly Travel Expense of Respondents

### Average Monthly Travel Expense

102 responses

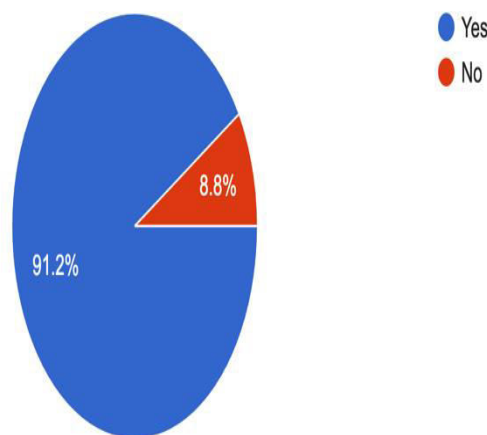


The majority of the respondents (36.3%) spend between ₹3,000 and ₹5,000 on travel expenses. However, 29.4% spend above ₹5,000. Therefore, there is moderate to high spending on the mobility of Generation Z. Only 13.7% spend less than ₹1,000. Therefore, this demonstrates the importance of researching digital payment usage in transportation-related transactions.

Fig 4: Graph shows whether respondents use digital payments (UPI, wallets, and cards) for travel or transport.

### Do you use digital payments (UPI, wallets, cards) for travel or transport?

102 responses





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A vast majority of the respondents, i.e., 91.2%, use digital payment systems to cover travel and transport expenses, whereas only 8.8% of the respondents do not use these facilities. This shows the high penetration of digital payment methods among the Gen Z population.

### Hypothesis Testing – One-Sample t-Test

#### For Hypothesis 2:

H02: Convenience does not significantly influence UPI adoption.

H2: Convenience significantly influences UPI adoption.

Fig 5: One-Sample T-Test for H2

#### One Sample T-Test

		Statistic	df	p
1. I prefer using UPI over cash when paying for travel or transport.	Student's t	7.69	92.0	<.001
2. Digital payments make travel transactions faster and more convenient.	Student's t	8.96	92.0	<.001
3. I use UPI even for small travel payments (below ₹100).	Student's t	6.07	92.0	<.001

Note.  $H_a \mu \neq 3$

The one-sample t-test was conducted to examine whether convenience-related perceptions significantly differ from the neutral midpoint ( $\mu = 3$ ). The results indicate that respondents significantly prefer using UPI over cash for travel payments ( $M = 3.83$ ,  $t(92) = 7.69$ ,  $p < .001$ ). Similarly, participants strongly agree that digital payments make travel transactions faster and more convenient ( $M = 4.01$ ,  $t(92) = 8.96$ ,  $p < .001$ ). The statement regarding usage of UPI for small-value travel payments also shows statistical significance ( $M = 3.70$ ,  $t(92) = 6.07$ ,  $p < .001$ ). Since all mean values exceed the neutral benchmark and p-values are below 0.05, the results demonstrate significant agreement. These findings confirm that convenience plays a crucial part in influencing UPI adoption for travel payments among Generation Z.

### Hypothesis Decision (H2)

The alternative hypothesis is accepted, and the null hypothesis is rejected since the p-values for each convenience-related component are below the significance level of 0.05, concluding that the convenience factor significantly influences the usage of UPI for payment while travelling for Generation Z respondents.

#### For Hypothesis 3:

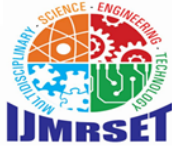
H3: Trust does not significantly influence digital payment adoption

H3: Trust significantly influences digital payment adoption.

Fig 6: One-Sample T-Test for H3

#### One Sample T-Test

		Statistic	df	p
9. I feel safe making transport payments through UPI.	Student's t	5.99	92.0	<.001
10. Failed transactions or payment delays reduce my trust in digital platforms	Student's t	4.12	92.0	<.001



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### One Sample T-Test

		Statistic	df	p
11. I believe banks provide better security than third-party payment apps.	Student's t	6.46	92.0	<.001

Note.  $H_a \mu \neq 3$

A one-sample t-test was carried out to test whether there was a significant difference between trust-related perceptions and the neutral midpoint of 3. From the results obtained, it was seen that respondents have significant agreement with the statement that they feel secure making transport payments through UPI ( $M = 3.65, t(92) = 5.99, p < 0.001$ ). Additionally, it was seen that respondents have significant agreement with the statement that failed transactions decrease trust in digital platforms ( $M = 3.45, t(92) = 4.12, p < 0.001$ ), showing significant sensitivity towards reliability issues in such platforms. Moreover, it was seen that respondents have significant agreement with the statement that bank security is higher than third-party payment applications ( $M = 3.62, t(92) = 6.46, p < 0.001$ ). As all the p-values are less than 0.05, in summary, the alternative hypothesis was accepted, whereas the null hypothesis was rejected.

### Hypothesis Decision (H3)

The alternative hypothesis was accepted, and the null hypothesis was rejected since all of the p-values were less than 0.05. Hence, it was concluded that trust and security have a significant impact on Generation Z's digital payment behaviour.

## IX. RESEARCH OUTCOME AND FINDINGS

The study shows that there is a strong inclination towards digital payment using the UPI system among the Generation Z population, especially with respect to travel and transport-related expenses. The results of the primary survey revealed that the majority of the respondents frequently used digital payment options like the UPI system to make regular commuting transactions. It was also found that the most significant factors that influenced the behaviour change were convenience, ease of use, and speed of the transaction. The results of the one-sample t-test revealed that the factors of convenience and trust were significant influencers of digital payment behaviour, as the results were found to be significantly higher than the neutral score.

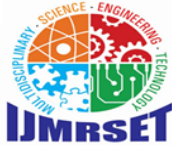
Regarding the macro-level results, the correlation and regression results revealed that the expansion of the UPI was significantly correlated with the currency in circulation. Though the results revealed that the usage of currency was still prevalent to a certain extent, the results showed that the growth of digital payment was impacting the traditional monetary system to a certain degree.

Considering the study's findings, it was revealed that the use of the UPI system for making travel-related transactions was impacting the banking behaviour of the Generation Z population to a certain degree, especially with respect to the reduced usage of physical cash and traditional banking methods like ATM transactions and bank visits.

## X. CONCLUSION

The study concludes that the impact of UPI-based travel payments has created significant changes in the banking behaviour of Generation Z in India. The results show that the preference for digital payment systems among young consumers is very strong due to the benefits of convenience and ease of accessibility. The results of the one-sample t-test also show that both factors play important roles in promoting the use of digital payment methods instead of cash-based systems. Therefore, the study shows the role of behavioural factors in promoting the use of digital payment systems.

At the macro-level, the study results show the impact of UPI-based transactions on the currency in circulation. Although the use of cash-based systems has not completely disappeared, the increasing trend of digital payments shows the gradual evolution of the monetary system. Therefore, the findings of the study indicate that the use of UPI-based



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payment systems is not just the evolution of the existing payment systems but the evolution of the existing monetary systems in India. The study results also show the role of Generation Z in the evolution of the existing monetary systems in India.

### XI. SCOPE FOR FUTURE RESEARCH

Although the current study helps gain insights into the payment habits of Generation Z through digital means, there is still a lot of scope for further research in this field. First and foremost, the current study is based on convenience sampling within a small demographic group. Probability sampling could be employed in the future to increase the sample size. A comparative study could also be conducted for people living in rural and urban areas. Additionally, it is recommended that future research use more macroeconomic variables, such as the volume of transactions carried out through ATMs, bank deposit patterns, or the number of people visiting bank branches. This would provide a better understanding of the changing banking structure. Moreover, a comparative study could be conducted for different generational groups. This would provide a broader view of the changing landscape of India's economy due to the digital revolution.

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