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A study on Users Preference and Usage of UPI-Enabled Payment Apps in Western Suburb of Mumbai

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Abstract

Digital India serves as a benchmark for many countries. India's fintech innovation 'UPI' has grown by leaps and bounds. Transactions worth Rs. 17.40 lakh crore were processed in November 2023 on the Unified Payments Interface (UPI) platform (The Hindu Business Line, 1st December 2023). Users Preference and usage of UPI-Enabled Payment Apps in Western Suburb of Mumbai was investigated in the current study. Simple random sampling was used to select the 300 samples. The study was conducted in March 2024. Structured questionnaire was used to collect responses of users of UPI-enabled apps. Simple percentages and the Chi-Square statistic were used to analyse the data. The result showed that UPI-Enabled Payment App 'Google Pay' is used on a wider scale. The UPI-Enabled Payment App is majorly used on a daily basis for shopping and meeting the daily expenses. Ease of use and 24 x 7 usages motivate users to use the UPI-Enabled Payment App. Users were extremely satisfied with the usage of the UPI-Enabled Payment App.

Key words: UPI-Enabled Payment Apps, Consumer Preference, Satisfaction Level

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1. Introduction

Prior to 2016, India had a largely cash-based economy. Today, India has been the global leader in real-time digital payments in the span of just six years. Real-time digital payments account for almost 40% of all the transactions. India's digital payment facilities are affordable, convenient and secure. India's digital payments market will be more than triple from $3 trillion to $10 trillion by 2026 (The Economics Times, 9th March 2023). India's transformation from a cash-based economy to Digital economy can be attributed to the initiatives of Government of India along with fintech companies for the development of an indigenous payment system. In 2015, the Indian government launched its 'Digital India' programme that aimed to achieve a 'faceless, paperless and cashless' status for financial transactions at grass-root level. The Digital India programme significantly expanded internet and smartphone usage, both of which had a direct positive impact on the growth of digital payments.

The Unified Payment Interface (UPI) represents an innovative method for transferring funds through a virtual payment address created by the National Payments Corporation of India (NPCI) (A., Mahesh, & Bhat, Ganesh, 2021**)**. The Unified Payments Interface (UPI) is a system that integrates various bank accounts, smooth fund routing, and merchant payments into a single mobile application (of any participating bank). Additionally, it supports 'Peer to Peer' collect requests that may be scheduled and paid for according to need and convenience (David, A. M., & Lusia, E. A. M. (2023). It is necessary to register the mobile number on the device with the bank. The recipient's UPI ID can be used to transfer funds. The Reserve Bank of India (RBI) regulates it, and it operates as an open source application programming interface (API) on top of the Immediate Payment Service (IMPS). UPI has become the preferred payment mode in the nation, exceeding the usage of cash, debit, and credit cards (Baradwaj, V. (n.d.)).

2. Unique features of UPI

Distinct features of UPI are as follows:

- Immediate money transfer is possible around the clock 24*7 and 365 days through mobile devices.
- Accessing different bank accounts using a single mobile application.
- Single Click 2 Factor Authentication that provides for a very strong feature of seamless single click payment.
- Virtual address of the customer provides incremental security where customers are not required to enter the details such as Card no, Account number; IFSC etc.
- Provides QR Code
- Renders exact amount.
- Merchant Payment with Single Application or In-App Payments.
- Utility Bill Payments, Over the Counter Payments, QR Code (Scan and Pay) based payments.
- Scalable donations, collections, and disbursements.
- Directly filing a complaint with a mobile app.

3. Stakeholders in UPI

The National Payments Corporation of India (NPCI) outlines the stakeholders in India's digital payments ecosystem as follows: (Baliyan, D., & Singh, N. (2023)

- Payer PSP (Payment Service Providers)
- Payee PSP (Payment Service Providers)
- Beneficiary Bank
- NPCI
- Bank Account Holders
- Merchants

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4. Growth of UPI in India

India set out on a very ambitious path to rebuild its financial system. India initiated measures to modernize its payments system leading up to the 2007 Payment and Settlement System Act, which in turn led to the creation of the National Payments Corporation of India (NPCI), which is responsible for managing India's retail payment and settlement systems. The NPCI has played a crucial role in fostering innovation through digital payments.

India rolled out its indigenously-developed Unified Payments Interface (UPI) system in 2016. UPI has had remarkable success. Today, although cash is still the king, UPI has nearly turned out to be the default payment option. Every day, millions of users, thousands of businesses, and 560 banks use it. UPI has been ranked as the top RTP system in the world on the basis of the system's standards, published Application Program Interface (API), and participation of Third Party vendors.

Table 1: Transaction Volume and Value of UPI

Year	Transaction Volume (in Mn)	INR Value (in Cr.)
April 16 – March 17	17.86	6,952.14
April 17 – March 18	904.87	109831.8
April 18 – March 19	5391.52	876970.72
April 19 – March 20	12,518.61	21,31,730.14
April 20 – March 21	22,330.65	41,03,653.58
April 21 – March 22	45,967.53	84,17,572.48
April 22 – March 23	83,751.14	1,39,20,675.21
April 23 – February 24	1,17,724.72	1,80,08,343.87

(Source: Compilation from NCPI, Product Statistics, https://www.npci.org.in/what-we-do/upi/product-statistics)

UPI has grown exponentially in transaction volume and value since its roll out. There is a substantial increase in transaction volume and INR value from April 2018 to March 2024, signifying expansion and development in the financial sector. The period from April 2021 to March 2024 has seen a particularly rapid acceleration in transaction volume and INR value, indicating robust economic growth and market participation.

Table 2: India's UPI Market Size Under US$5T – Economy Scenarios

Base Year / Possible Scenario	Size of the Digital Payments (UPI) Market (INR, in Lakh Crores)	CAGR of Nominal GDP (in Percent)	CAGR of Real GDP (in Percent)	Share of value of UPI transactions as a percent of Nominal GDP
2021-22 (Base Case)	83.8	NA	NA	35.4
2025-26 scenario	242.7	15.9	8.34	56.9
2026-27 scenario	280.3	13.2	6.03	63.8
2028-29 scenario	356.3	10.1	4	76.7

(Source: Ghosh, N., & Dsouza, R. (2023). India's UPI Market: Projections for Growth Under Various GDP Scenarios. Occasional Papers. Observer Research Foundation, 1-56.)

The significance of digital transactions within India's five trillion-dollar economy may vary across different states compared to the baseline of 2021-22. On an overall scale, digital transactions could range from 2.8 to 4.25 times their 2021-22 value, contingent upon the attainment of the five trillion-dollar milestone in different years.

5. Third Party Application Provider (TPAP)

One of the most significant breakthroughs, which considerably accelerated adoption among customers and merchants, was the entry of Third Parties into India's RTP ecosystem.

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Table 2: Top Five UPI Apps (February 2024)

Application Name	Customer Initiated Transactions	
	Volume (Mn)	Value (Cr)
PhonePe	6140.97	9,67,467.18
Google Pay	4755.40	6,71,539.96
Paytm Payments Bank App	1332.57	1,51,044.10
Cred	118.77	40,525.56
Amazon Pay	63.53	6,611.88

(Source: NCPI, UPI Ecosystem Statistics, https://www.npci.org.in/what-we-do/upi/upi-ecosystem-statistics)

PhonePe and Google Pay dominate the customer-initiated transactions market, with PhonePe leading in both volume and value, followed by Google Pay. Paytm Payments Bank App, Cred, and Amazon Pay also contribute with comparatively lower transaction volumes and values.

6. Review of literature

- **Fahad, M. S. (2022)** in his study found that factors like relative advantage, complexity, and observability significantly influence UPI adoption, with higher satisfaction and intention to use correlating positively with recommendations from existing users.
- **Somanjili Mohapatra (2017)** found that in the digital age, connectivity has become a huge asset for UPI growth. Numerous factors, including the rise in smartphone sales, falling data costs, the availability of free and simple money transfer platforms, and the simplicity of using mobile banking services, have contributed to the rapid growth of UPI.
- **Radhika Basavraj Kakade and Nupur A Veshne (2017)** found that UPI is as simple to use as sending an email or text message. UPI operates on a platform that is constantly open 24 X 7 X 365.
- **Sardana, V., & Singhania, S. (2018)** pointed out that "Payments made using digital instruments, such as mobile payment applications, mobile wallets, bitcoin or virtual currency coins, and other electronic payment methods," are examples of what is meant by "digital payments."
- **Philip (2019)** pointed out that transactions over UPI are completed with a single swipe and without any middlemen.
- **Kamble, R. (2022)** UPI offers cost-free transactions without third-party involvement, completing transactions within minutes compared to other digital payment methods. Biometric authentication enhances security and integrates next-gen technology. Education correlates positively with UPI usage; increased smartphone usage boosts acceptance.
- **Bose, K. (2023)** finds that majority of users use UPI payments every day and had a strong positive Satisfaction towards technology used in banking.

7. Gap of the study:

In the western suburbs of Mumbai, dense urban populations coexist with diverse socio-economic demographics, blending commercial hubs with vibrant residential neighborhoods. Renowned for its tech-savvy inhabitants, the region reflects a shifting socio-economic landscape, with lower-income groups transitioning to the middle strata. Amidst these dynamics, myriad changes unfold, shaping consumer behaviors, business landscapes, and community interactions.

UPI had been launched in 2016 in India. There had been scarce research on the behavior of UPI-enabled payment app users in the western suburb of Mumbai. Consequently, this study attempts to makes a modest contribution to the body of knowledge surrounding UPI-enabled payment apps. By shedding light on users' preferences and usage patterns, it adds valuable insights to the understanding of digital payment behaviors in specific urban settings.

8. Objectives of the study:

The present study aims to explore the following objectives about UPI-Enabled Payment Apps:

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1. To find out the most preferred UPI-Enabled Payment Apps by the users and the frequency of its usage.
2. To know the purpose of using UPI-Enabled payment apps.
3. To investigate factors motivating the usage of UPI-Enabled payment apps.
4. To find out the extent to which users are satisfied with UPI-Enabled Payment Apps used by the user.

9. Hypothesis of the study

In the light of above objectives, the following hypothesis was formulated for testing:

H0: There is no significant association between satisfaction of users with the UPI-Enabled Payment Apps and frequency of usage of UPI-Enabled Payment Apps.

H1: There is a significant association between satisfaction of users with the UPI-Enabled Payment Apps and frequency of usage of UPI-Enabled Payment Apps.

10. Research Methodology:

The two main categories of information sources are primary and secondary. Both the sources were used for the study. For the current study, a simple random sampling method was applied to select the sample of 300. Structured questionnaire was distributed among the users of UPI-Enabled Payment Apps of Western Suburb of Mumbai. The study was carried out in March 2023. Simple percentages and the Chi-Square were employed to analyse the data.

11. Results and discussion

The perspective of Users Preference and Usage of UPI-Enabled Payment Apps in Western Suburb of Mumbai is collected.

Table 3: Demographic profile of the user

Age (in years)			**Gender**		**Occupation**				
18- 25	**25- 40**	**40+**	**Male**	**Female**	**Homemaker**	**Professional**	**Salaried**	**Self Employed**	**Student**
54%	38%	8%	62%	38%	10%	16%	20%	16%	38%

(Source: Primary)

Table 3 reveals that the majority of the users belonged to the age group of 18 – 25 years of age, male and was salaried.

Table 4: Most Preferred and Used UPI-Enabled Payment App

App	Google pay	PhonePe	Paytm	Bank of Baroda (BOB) UPI
Percentage	72%	14%	10%	4%

(Source: Primary)

Table 4 clearly shows the dominance of Google pay followed by PhonePe, Paytm and Bank of Baroda. Findings of the paper are similar to findings of Anute, N., et al, (2022), Gupta, S. B., et al (2020), Sanjai, V. et al (2021), Shetkar, S. (2023).

Table 5: Frequency of using most preferred UPI-Enabled payment apps

Frequency	Daily	Weekly	Monthly
Percentage	64%	24%	12%

(Source: Primary)

Table 5 shows that the majority of the users used UPI-Enabled payment apps on a daily basis. Findings of the paper are similar to findings of Bhuva, M. A. (2023).

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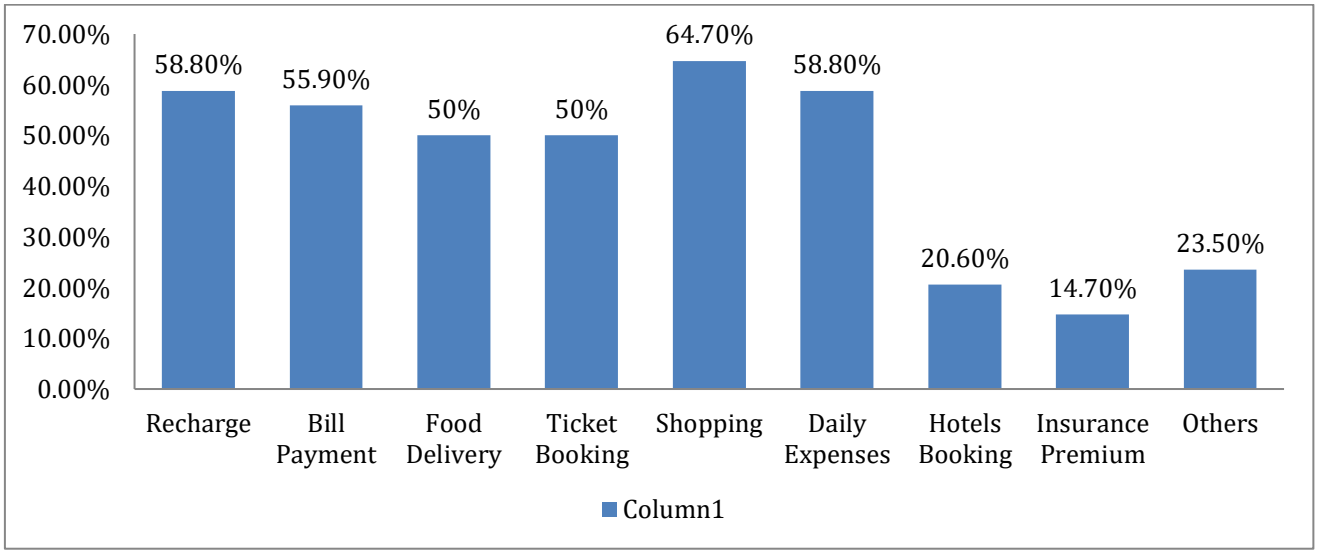
Chart 1: Purposes of using UPI-enabled payment apps



(Source: Primary)

Chart 1 reveals that the majority of the users use UPI-enabled payment apps primarily for shopping followed by meeting their daily expenses and various recharges, bill payments, food delivery, ticket booking. UPI enabled payment apps are used less for booking hotels, paying insurance premium and other activities.

Chart 2: Factors motivating use of UPI-Enabled Payment Apps

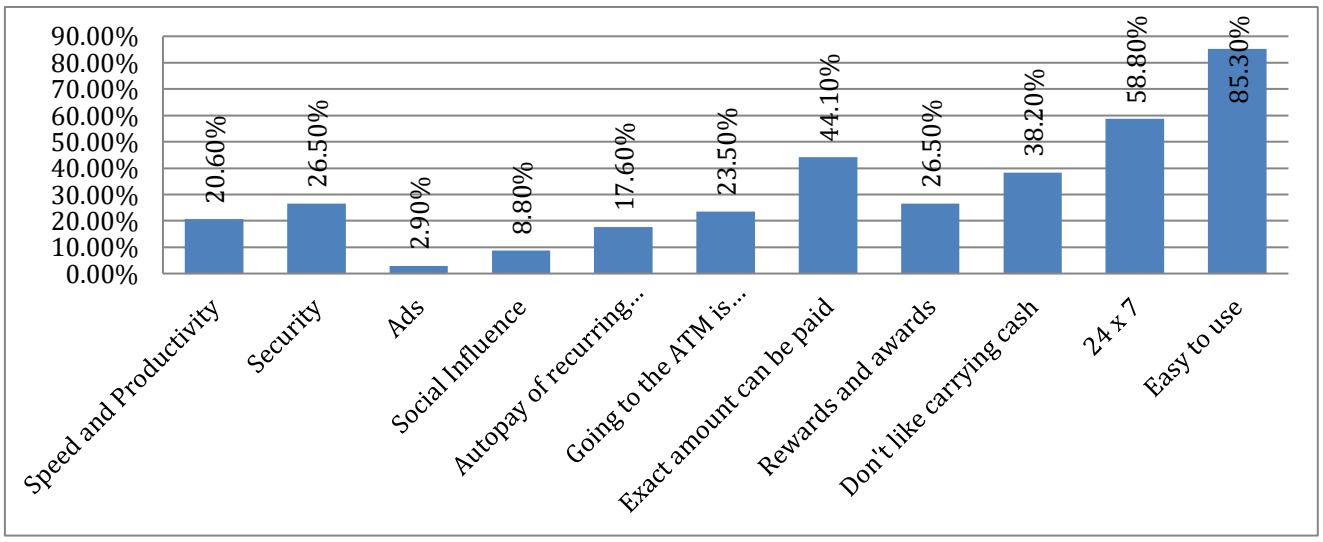


Chart 2 revels that 'ease of use' motivate majority of the users to use UPI-Enabled Payment Apps followed by around the clock functioning, paying exact money, disliking in carrying cash, receiving rewards and awards, security, inconvenience in going to ATM, speed and productivity, autopay of recurring payments, social influence and ads. Findings of the study are in aligning with findings of Gohil, S. et al (2023) and Prakasha, M. N. (2023).

Table 6: Satisfaction with the most preferred and used UPI-Enabled payment app

Satisfaction	Extremely satisfied	Satisfied	Less satisfied
Percentage	60%	34%	6%

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(Source: Primary)

Table 6 highlights that the majority of the users were extremely satisfied with UPI-Enabled payment app. Only 4% of the users were less satisfied.

12. Hypothesis Testing

H0: There is no significant association between satisfaction of users with the UPI-Enabled Payment Apps and frequency of usage of UPI-Enabled Payment Apps.

H1: There is significant association between satisfaction of users with the UPI-Enabled Payment Apps and frequency of usage of UPI-Enabled Payment Apps.

Table 7: Cross tabulation for satisfaction of user with the UPI-enabled payment apps and frequency of usage of UPI-enabled payment apps

	Satisfaction derived by user			
Frequency	**Extremely satisfied**	**Satisfied**	**Less satisfied**	**Grand Total**
Daily	108	72	12	**192**
Weekly	60	9	3	**72**
Monthly	12	21	3	**36**
Grand Total	**180**	**102**	**18**	**300**

Table 2: Result of Chi-square of satisfaction of user with the UPI-enabled payment apps and frequency of usage of UPI-enabled payment apps

chi-square	Df	Table value
28.75	4	9.488

The calculated Chi-Square statistics is 28.75, critical table value is 9.488, degree of freedom is 4, and level of significance is 0.05.

Decision and Conclusion:

As the calculated chi-square value is more than the table value, there is failure in accepting null hypothesis. Therefore, it can be concluded that '**There is significant association between satisfaction of users with the UPI-Enabled Payment Apps and frequency of usage of UPI-Enabled Payment Apps.**'

13. Limitation and scope of further research

- The study was conducted in Western Suburb of Mumbai only. Therefore, the findings of the study may not be applicable to the other cities.
- It was a time consuming activity as less people showed an interest in filling up the questionnaires.
- The sample size is very small and it may not be the representative of the population in general. Hence, there is a wide scope for repeating this research with a more broad-based sample which could possibly lead to a different set of results.

14. Conclusion

UPI has casted positive changes in digital payment. UPI has increased accessibility and convenience for diverse consumers, fueling the growth of digital financial services in India. As a result of the success of UPI-Enabled payment apps, India has become a significant digital economy, surpassing expectations for development in terms of both the value and volume of digital transactions.

References

1. A., Mahesh, & Bhat, Ganesh. (2021). Digital Payment Service in India - A Case Study of Unified Payment Interface. *International Journal of Case Studies in Business IT and Education*, 4(2), 114. DOI: 10.47992/IJCSBE.2581.6942.0114

2. Anute, N., Tyagi, G., & Jagadale, H. (2022). A study on digital payment applications in India. *Journal of Management Research and Analysis, 9*(3), 150-156. DOI: 10.18231/j.jmra.2022.028. [CC BY-NC-SA 4.0]
3. Baliyan, D., & Singh, N. (2023). Unified Payments Interface (UPI): A Digital Transformation in India. *International Journal of Creative Research Thoughts (IJCRT)*, 11, (3), 14-21.
4. B. Philip. (2019). Unified payment interface–Impact of UPI in customer satisfaction. *Research Guru: Online Journal of Multidisciplinary Subjects*, p. 12
5. Baradwaj, V. (n.d.). UPI adoption and usage patterns by small merchants: a study. *Research Archive of Rising Scholars*, 1(1), 1-19. doi:https://doi.org/10.58445/rars.545
6. Bhuva, M. A. (2023). A Study on Factors Influencing the Adoption and Usage of Unified Payment Interface (UPI) Among iGen in Mumbai. *Journal of Emerging Technologies and Innovative Research (JETIR)*, 10(4), 1-6.
7. Bose, K. (2023). A Study on Awareness of UPI Payment – Students' Perspective. *Journal of Emerging Technologies and Innovative Research* (JETIR), 10 (11), 364-375.
8. David, A. M., & Lusia, E. A. M. (2023). Performance of Unified Payments Interface (UPI). *Journal of the Asiatic Society of Mumbai*, XCVI(26), 66-70.
9. Fahad, M. S. (2022). Exploring the determinants of adoption of Unified Payment Interface (UPI) in India: A study based on diffusion of innovation theory. *Digital Business*, 2(2), 100040. https://doi.org/10.1016/j.digbus.2022.100040.
10. Ghosh, N., & Dsouza, R. (2023). India's UPI Market: Projections for Growth Under Various GDP Scenarios. *Occasional Papers*. Observer Research Foundation, 1-56.
11. Gohil, S., Patel, S., & Patel, S. (2023). The Study on Public Acceptance of UPI and Digital Payments. *International Journal of Creative Research Thoughts (IJCRT)*, 11 (2), e1-e5, ISSN: 2320-2882.
12. Gupta, S. B., Yadav, R. K., & Shivani. (2020). Study of Growing Popularity of Payment Apps in India. *TEST Engineering & Management*, 82, 16110-16119.
13. Kamble, R. (2022). Impact of UPI technology to maintain sustainability during COVID-19 in Mumbai region. *International Journal of Creative Research Thoughts (IJCRT)*, 10(1), 67-79.
14. Prakasha, M. N. (2023). A Study on Unified Payment Interface (UPI) Among University Students in Madikeri City. *International Journal of Management* (IJM), 14(2), 1-8. https://doi.org/10.17605/OSF.10/HTMU6
15. Radhika Basavaraj Kakade and Nupur A. Veshne (2017). Unified Payment Interface (UPI) - A Way towards Cashless Economy. *International Research Journal of Engineering and Technology (IRJET)*. 4, 11, 762 – 766.
16. Sanjai, V., & Kalai lakshmi, T. (2021). A Study on Usage of Online Payment Apps by Customers. *International Journal of Creative Research Thoughts (IJCRT)*, 9 (5), 312 – 360, ISSN: 2320-2882.
17. Sardana, V., & Singhania, S. (2018). Digital Technology in the Realm of Banking: A Review of Literature. *International Journal of Research in Finance and Management*, *1*(2), 28–32.
18. Shetkar, S. (2023). Google Pay and Phone Pay: A Comparative Study. *International Journal of Research Publication and Reviews*, 4(1), 755-762. ISSN 2582-7421.
19. Somanjoli Mohapatra (2017). Unified Payment Interface (UPI): A Cashless Indian E-Transaction Process. *New Delhi Publishers*. 5, 2, 29 – 42.
20. The Hindu Business Line, 1st December 2023
21. The Economics Times, 9th March 2023
22. https://www.npci.org.in/what-we-do/upi/upi-ecosystem-statistics#innerTabTwoMar23)
23. https://www.npci.org.in/what-we-do/upi/product-statistics