

Towards a Viksit Bharat: UPI as a Catalyst of Development in Urban Cachar

Sujit Sarkar¹, Rajat Das², Nirupam Karmakar³

¹Assistant Professor of Economics, Ramanuj Gupta Degree College, Silchar, Cachar, Assam

²Assistant Professor of Commerce, Ramanuj Gupta Degree College, Silchar, Cachar, Assam

³Former student, Department of Commerce, Assam University, Silchar, Cachar, Assam

Abstract:

Unified Payment Interface (UPI), a contemporary payment system has been restructuring the financial and payment infrastructure of India. It has emerged as an alternative to traditional cash-based payment methods and is making the transaction process seamless, convenient, transparent, and secure. UPI has the potential to strengthen the financial infrastructure and market base of underdeveloped regions like Cachar. The study seeks to analyze the spread of these services and their impact on the socio-economic life of the educated urban masses of Cachar district using a set of primary data. The analysis also highlights how UPI has been influencing urban consumer decisions and their monthly consumption expenditures using descriptive statistics which is followed by policy suggestions to address the security concerns associated with the unique and newly discovered payment system of India.

Keywords: Unified Payment Interface (UPI), Cachar, Consumer Behavior, Digital Payment system.

Introduction:

The emergence of the digital payment system has transformed and restructured the global financial system by promising more accessibility, transparency, and security. Particularly in India, the introduction of the Unified Payment Interface (UPI) by the National Payments Corporation of India (NPCI) in April 2016 came up as a novel financial tactic aimed at streamlining peer-to-peer (P2P) and peer-to-merchant (P2M) payments and reducing the dependency on cash and conventional banking techniques (RBI, 2019). UPI has penetrated even the rural economies of India and is being used across all occupations i.e. from farmers, roadside hawkers, E-rickshaw drivers to big business firms and corporates. UPI has positively impacted small and medium enterprises by giving them access to instant and low-cost digital transactions. It has empowered local businesses by increasing their customer base, streamlining payment procedures, and reducing operational costs (ET, 2023). As a result, small street vendors and micro-enterprises, particularly in underdeveloped regions akin to Cachar, have been able to participate in the digital economy, boosting their revenue potential and economic resilience.

Cachar, the largest southern district of Assam has great potential to be a business hub for its spatial position. The study region shares Assam's boundary with two neighboring states viz. Mizoram and Manipur and also has proximity to Bangladesh. Further, the Cachar-Mizoram-Myanmar route could serve as a gateway for India towards its Southeast Asian neighbor and help realize its goals of act-east policy. Regrettably, Cachar was recognized as one of the 250th

most backward districts by the government of India under the Backward Region Grant Fund Program, in 2006. However continuous attempts are being made by the government to develop the region and utilize its full geopolitical and economic potential. One such strategy for developing the backward regions could be strengthening the financial infrastructure by introducing UPI to every section of society. Although Cachar was sluggish in adopting the new payment method, nevertheless the recent surge in the use of UPI in the study district holds the potential to boost the development process of the regional economy by promoting ease of doing business and by increasing consumption expenditure and demand in the region. The introduction of UPI in Cachar may have a substantial effect on the spending and consumption habits of the locals and their businesses which must be investigated as it may have significant policy implications in line with the progress of the region.

Review of Literature

The development of UPI was initiated based on the foundation of key payment systems known as Immediate Payment Service (IMPS) in 2010, which enabled real-time fund transfers across banks (NPCI, 2023). Based on the success of IMPS, UPI was designed to offer an even more seamless, user-friendly platform that could integrate multiple bank accounts into a single mobile application. The objective was to design a payment solution that allowed users to send and receive money using simple identifiers like a Virtual Payment Address (VPA), rather than complex banking details (Sharma & Gupta, 2021).

The launch of UPI complemented India's objective of digitalization and financial inclusion. In November 2016, the Indian government's demonetization policy created a sudden demand for cashless payment options. UPI developed as a vital instrument during this period, providing a convenient and secure transaction method for individuals and businesses without having to rely on physical currency (Patel & Rao, 2022). Initially, UPI was launched with the help of 21 banks, but its user base expanded rapidly due to its simplicity, security features, and zero-cost transaction model. The launch of popular third-party UPI applications, such as PhonePe, Google Pay, and Paytm, played a significant role in driving mass adoption (Kumar & Singh, 2020). In recent years, UPI has recorded exponential growth in transaction volume and as well as value. Mathew et al. (2024) highlighted that from a modest start in 2016, with 2.65 million transactions, UPI transactions are projected to exceed 264 billion in volume by 2025. This increase in the volume of UPI transactions is attributed to factors such as increased smartphone penetration, awareness and promotion of digital payments, and the platform's user-friendly interface.

A study by Mishra and Joshi (2020) highlights that UPI has led to the formalization of the economy by promoting digital transactions among small businesses and unbanked populations. Goyal and Monga (2022) conducted an empirical study to assess consumer perceptions and attitudes towards UPI. Their findings reveal positive feedback, with users appreciating UPI's convenience, speed, and security features. Furthermore, reduced cash handling costs and increased transparency in transactions have enhanced tax compliance and curbed the circulation of black money (Agarwal & Verma, 2021). However, concerns regarding data privacy and transaction failures were noted, suggesting areas for improvement. Despite its rapid adoption, UPI faces challenges related to security and fraud prevention. Studies by Gupta

and Mehta (2021) indicate that phishing attacks, unauthorized transactions, and data breaches pose threats to users. However, advancements in encryption technologies and the implementation of two-factor authentication have strengthened security measures (Reddy & Singh, 2022). Addressing these challenges is crucial in maintaining user trust and ensuring the sustainability of the cashless ecosystem.

The literature indicates that UPI has revolutionized digital payments in India, contributing significantly to financial inclusion and economic development. While user perceptions are largely positive, addressing challenges related to security and technological advancements will be crucial for sustaining UPI's growth trajectory.

Research Gap:

The review of the past literature indicates that although there are numerous pan-India level research relating to UPI but the existing literature lacks insights from the Cachar district regarding the use pattern of UPI and how it interferes with the consumption and business decisions of the urban masses. This study seeks to fill up the gap and examine the various dimensions related to UPI usage concerning urban areas of the Cachar district. This could have immense policy implications for amplifying the development process of the region.

Objectives of the study:

1. To analyze the use of UPI across different socio-economic dimensions.
2. To study and analyze the causes and preferences of individuals for the use of various UPI platforms.
3. To analyze the impact of UPI payment methods on the consumption and transaction behavior of individuals.

Methodology and Sample Design

The study has been conducted based on primary data. The data has been collected using Stratified Random Sampling from 100 individuals in the urban area of the Cachar district using the Direct Personal Investigation Method with the help of a questionnaire. All the objectives have been addressed by using descriptive statistics derived from analyzing the primary data.

The sample collected is diverse and tries to represent various socio-economic groups effectively. It is to be noted that the individuals studied are literate adults ranging from “20 years -60 years” who are mainly the income earners. The sample derived has 31.90 percent of female and 68.10 percent of male respondents. The analysis of the caste distribution of the sample highlights that 60 percent of the respondents were General, 20 percent were OBC and 15 and 5 percent were SC and ST respectively. The income categorization of the respondents shows 28.9 percent of the respondents have an income level of less than 30000 rupees whereas 36.2 percent of the respondents have an income level between 30000 to 70000 rupees and the remaining 34.9 percent have an income level of more than 70000 rupees. The occupation and the education profile of the sample respondents are also provided below which reflect that the majority of the respondents are graduates or post graduate and are employed as salaried persons.

Tab 1.0: Percentage distribution of respondents across various occupations

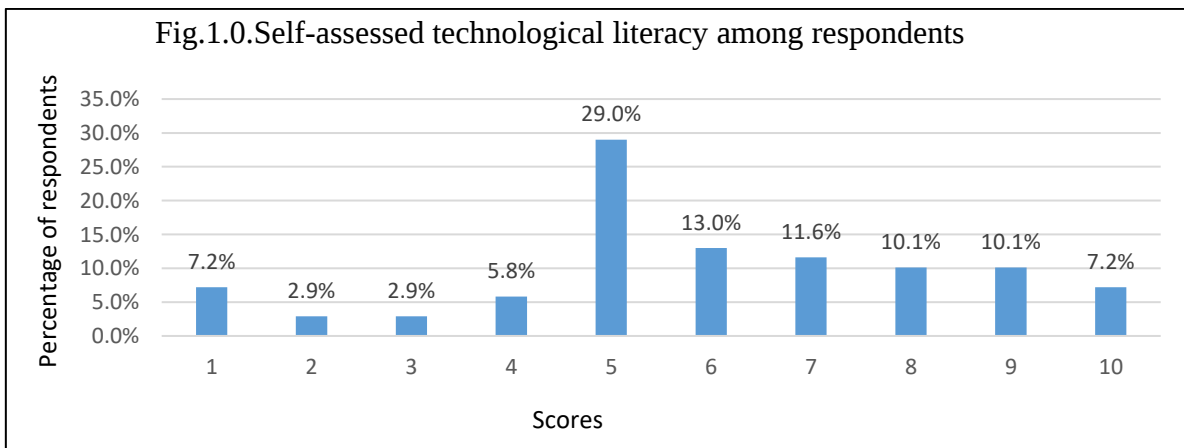
Occupation	Percentage of respondents
Self-employed	24.5
Salaried employed	59.6
Daily wage earners	7.2
Others	8.7
Source: Field Survey, 2024	

Tab. 1.1. Percentage distribution of respondents across various education levels

Educational Level	Percentage of respondents
Matriculation	15.9
Higher Secondary	10.2
Graduation	33.3
Post-Graduation	37.7
PhD	2.9

Source: Field Survey, 2024

The self-assessed technological literacy score has also been analyzed for the study group using a scale ranging from 0 to 10, where 0 indicates no technological knowledge and 10 represents a high level of technological proficiency. Respondents rated themselves across this scale, reflecting various levels of comfort and familiarity with technology. In the sample, 29 percent of the respondents rated themselves moderately, while 81 percent rated themselves more than 5 in technological literacy, indicating that the majority of respondents have a good degree of technological literacy.



Source: Field Survey, 2024

Limitations of the study:

The study considers only the urban-educated individuals, who have at least completed high school, as sample units. The study realizes that undereducated income earners mostly use the UPI services for unilateral transfer i.e. for receiving payment only. A very insignificant number of individuals among the said group feel comfortable or have the habit of making the payment using the digitized technique thereby making them unsuitable for the study. UPI is a very recent

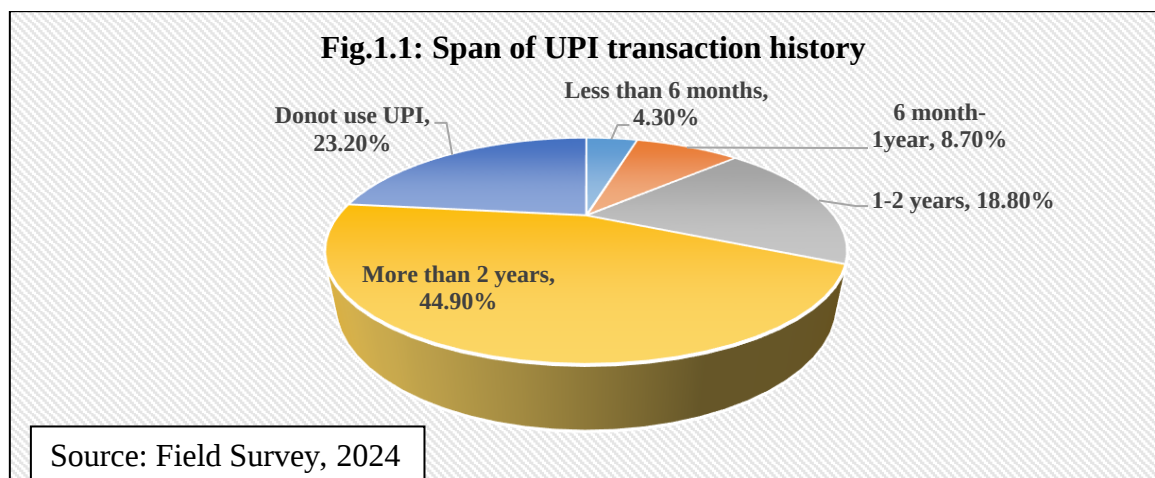
Table 1.1: Percentage distribution of respondents across frequency of daily usage of UPI	
Daily frequency of UPI use	Percentage of respondents
0	23.2
1 to 3 times	36.3
4 to 6 times	18.8
More than 6 times	21.7
Source: Field Survey, 2024	

innovation and currently rural and undereducated population have not been able to adopt all its services completely. Thus the study aims to analyze the penetration and popularity of this service among the urban educated masses who understand the various dimensions of this service completely.

Results and Findings:

Magnitude and frequency of UPI usage across various socio-economic dimensions

The analysis of the data reveals that 76.8 percent of the urban masses of Cachar use UPI regularly and multiple times a day. The frequency of their daily use is highlighted in the table below.



The distribution of UPI usage across the genders reveals that among the urban males of Cachar 73.61 percent use UPI, while in the case of females, only 45.45 percent use UPI regularly. Concerning castes, 73.17 percent of General, 64.28 percent of OBC, 33.33 percent of SC, and 24.67 percent of ST use UPI services daily. The analysis of the span of UPI usage history shows that about 45 percent have been using UPI for the last two years and a significant number of users (32 percent of users) have come across UPI services within the past 1 year (Fig 1.1).

The use of UPI is popular among salaried and self-employed persons. The study reveals that 87.5 percent of self-employed and 65.2 percent of salaried employed are using UPI services frequently. The proportion of users is greater in the case of self-employed as the group mainly includes various service providers, roadside shop owners, and vendors who use UPI services

on a daily basis for their business transactions. Providing UPI payment services have become an important business strategy to attract and retain customers in recent times. However, the use of this contemporary payment method is negligible among the daily wage earners. The use of UPI across age, income, and education levels has also been classified which reveals that the younger age group (20 years - 40 years) has a higher proportion of their population using UPI compared to the elderly age group (40 years- 60 years) as shown in tab 1.3.

Tab.1.3: Percentage distribution of UPI users across various age groups	
Age Groups (in years)	Percentage of UPI users
20-30	85.5
30-40	91.67
40-50	75.18
50-60	61.43
Source- Field Survey (2024)	

Tab.1.4: Percentage distribution of UPI users across education levels	
Education Levels	Percentage of the Respondents
Matriculation	18.1
Higher Secondary	30
Graduation	69
Post-Graduation	87
Ph.D	100
Source- Field Survey (2024)	

With respect to education, the use of UPI is proportionately high among the graduate and post-graduated masses as shown by tab. 1.4. The table justifies the fact that there is a positive relation between education level and UPI usage.

Regarding income, the use of UPI is unpopular among low-income earners however the number of UPI users increases with an increase in income levels (tab.1.5).

Tab.1.5: Percentage distribution of UPI users across income level	
Income Level	Percentage of the Respondents
₹0-₹10,000	30.8
₹10,000-₹30,000	87.7

₹30,000-₹50,000	93.8
₹50,000-₹70,000	62.5
₹70,000-₹100,000	75
₹100,000 and above	93.8
Source- Field Survey (2024)	

Preference for UPI platforms and causes for UPI usage.

The analysis of the data in line with the second objective shows that about 43.4 percent of the urban population of Cachar prefers Google Pay for using the UPI services, for its user-friendly interface, followed by PhonePe and Paytm. The services are mainly used for making payments for groceries and day-to-day purchases of consumer goods followed by making payments for utility bills.

Tab. 1.6. Percentage distribution of UPI users across various payment apps	
Platform Preference	Percentage of UPI users
Google Pay	43.4
Phone Pay	13.0
Paytm	10.1
Other	10.1
Do not use UPI	23.2
Source: Field Survey, 2024	

Tab. 1.7. Percentage distribution of UPI users across various purposes	
The purpose for most frequent use of UPI	Percentage of UPI users
Groceries and essentials	33.3
E-commerce	11.5
Utility bills	18.8
Others	13.0
Do not use UPI	23.2
Source: Field Survey, 2024	

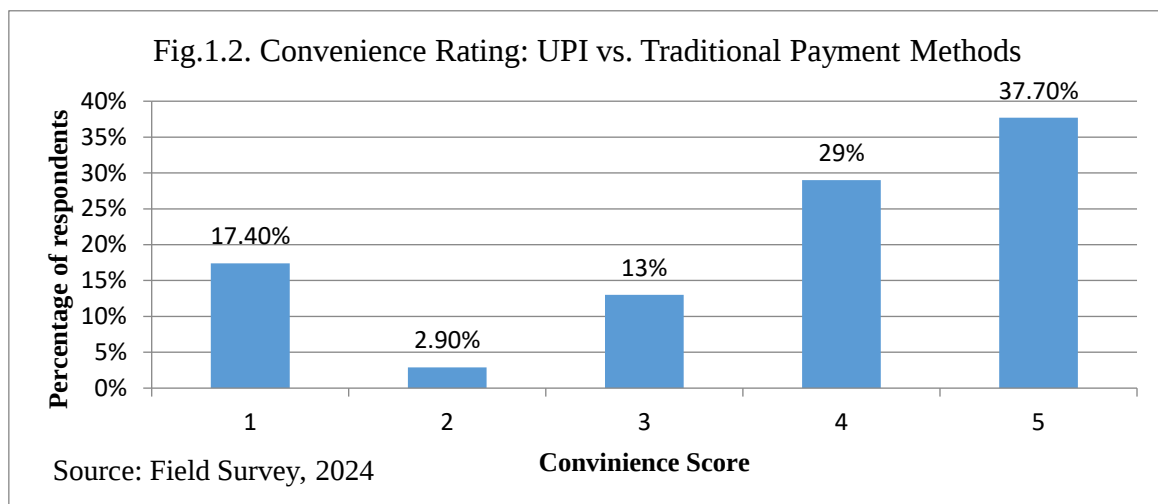
It is to be noted that existing literature hints toward the preference for PhonePe over Google Pay across India which stands contrary to the findings for the Cachar district.

UPI impact on consumer behavior

With the introduction of UPI, a significant number of the population prefers to use auto-pay services for making payments for their fixed monthly expenditures viz. rent, utility bills, EMIs, etc. Moreover, respondents asserted that they choose to pay through UPI in marketplaces to do away with the problem of availability of changes. In addition to this, the preference for UPI has also developed among the masses as it helps them to track their monthly expenditure.

Tab.1.8 highlights that among the urban population, a significant proportion (39 percent) prefer to spend more than 50 percent of their monthly expenditure through UPI.

The data reveals that 52.2 percent of respondents believe that UPI has impacted their spending compared to cash transactions, suggesting that UPI has influenced the way they manage their finances. This could be due to the ease, speed, and convenience of making digital payments. The convenience of UPI compared to traditional payment methods was rated on a scale from 1 to 5, where 5 represents "very convenient" and 1 represents "very inconvenient". 37.7 percent of respondents rated UPI with a 5, indicating that a significant portion of users find UPI very convenient compared to traditional payment methods (Fig.1.2).



There is a very strong positive correlation between the convenience rating of UPI and the education level of respondents, with a correlation coefficient of 0.9974. This suggests that individuals with higher educational attainment are more likely to find UPI convenient. This may be due to higher technological literacy, better access to smartphones, or greater familiarity with digital payment platforms among educated individuals.

Tab.1.8. Percentage distribution of UPI users across various levels of monthly expenditure (in percentage) spent through UPI.

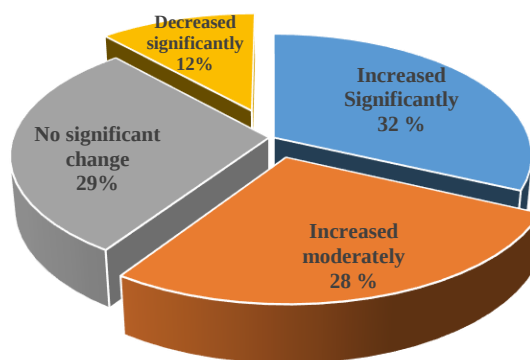
Percentage of monthly expenditure spent through UPI	Percentage of UPI users
0 – 25	35
25- 50	26
50- 75	22
75 and above	17
Source: Field Survey, 2024	

The analysis also reveals that UPI has increased shopping and consumption frequency for nearly 60 percent of respondents, with 31.9 percent reporting a significant rise and 27.5 percent noting a moderate increase. This trend is more prominent among individuals with

higher technological literacy, education levels, and income, indicating that ease of use and purchasing power drive digital spending. However, 29 percent experienced no change, while 11.6 percent reported a decrease, suggesting that some users remain unaffected by payment convenience, likely due to conscious spending habits or limited disposable income.

The study was further extended to analyze if the urban masses of Cachar prefer purchasing from business outlets that have UPI payment facilities over traditional cash payouts. The survey shows that 63.4 percent of respondents prefer businesses that accept UPI, indicating

Fig 1.3. Impact of UPI on Shopping and Consumption Frequency



Source: Field Survey,
2024

a strong inclination toward digital payments due to their convenience and speed. This data highlights that a majority of users see UPI acceptance as a valuable factor in choosing businesses, emphasizing the growing role of digital payment systems in everyday transactions.

Conclusions and Suggestions:

The financial infrastructure of Cachar is evolving with the advent of UPI

which has become an attractive alternative to traditional payment methods for the educated urban masses for its convenience, simplicity, and zero-cost transaction model. Although a significant portion of the population has successfully adopted the contemporary payment method however about 23 percent of literate urban population still remains alienated from its use. The adoption and use of UPI also remain limited among the female population.

The study suggested that there is a significant positive impact of UPI on the consumption expenditure and consumption pattern of the respondents, particularly for those who are graduate and post-graduate and belonging to the high-income strata. The study also highlights the concerns of the respondents with respect to the adoption of UPI in the form of increasing phishing attacks and data breaches. Moreover, the dependence of UPI on the internet cannot be ignored. It becomes challenging to use UPI services in case of low signal strength or in the low signal coverage area. These hurdles restrict the expansion of UPI payment services which promote economic growth of the regions by promising ease of doing business, transparency, and tax compliance.

Expansion and complete adoption of UPI payment services are desirable for raising the demand and consumption expenditure in the region which could stimulate a multiplier effect necessary to pace up the process of development. UPI can be pivotal in building a strong business infrastructure for Cachar which could be a strategic geopolitical and economic region for India in realizing its Act East policy. This could be achieved by launching targeted awareness programs in the form of hands-on workshops and demonstrations in the local

language to educate the remaining 23 percent of the literate urban population, especially women regarding the benefits of UPI. The security concerns relating to digital payments can be addressed by developing an AI-driven fraud detection system and by encouraging 5-layer authentication for high-value transactions. Expansion of infrastructure to ensure seamless internet access and availability of digital payment options in small towns and peri-urban areas of Cachar can also help in widening the digital payment user base. Moreover encouraging local vendors and small businesses to integrate UPI by providing technical support and onboarding subsidies can also make the newly invented payment system popular. Lastly developing voice-enabled UPI services and simplified mobile interfaces based on regional languages could also help assist low digital literacy users.

References

1. Agarwal, R., & Verma, S. (2021). Impact of UPI on tax compliance and economic transparency. *Journal of Financial Technology*, 8(2), 45-60.
2. Goyal, M. K., & Monga, N. (2022). An empirical study on perception and attitude of consumers towards Unified Payment Interface (UPI). *International Journal of Research and Analytical Reviews*, 9(4), 123–130. Retrieved from [researchgate.net](https://www.researchgate.net)
3. Gupta, A., & Mehta, R. (2021). Analyzing security risks in UPI transactions. *Cybersecurity Journal of India*, 6(3), 55-72.
4. Kumar, S., & Singh, R. (2020). Digital Payment Systems in India: The Rise of UPI. *Journal of Banking and Finance*, 34(2), 78–95.
5. Mathew, S. M., Joseph, S., Abraham, M., & Shanimon, S. (2024). Exploring the exponential growth of UPI in India: A study on digital payment transformation (2016–2024). *Library Progress (International)*, 44(3), 10796–10805
6. Mishra, P., & Joshi, A. (2020). Financial inclusion through UPI: A case study of digital transactions in India. *Journal of Economic Studies*, 15(2), 76-91.
7. National Payments Corporation of India. (2023). Unified Payments Interface (UPI) A payment solution designed to transform economies of the 21st century, [https://www.npci.org.in/PDF/npci/knowledge-center/partner-whitepapers/Unified-Payments-Interface-\(UPI\)-A-payment-solution-designed-to-transform-economies-of-the-21st-Century.pdf](https://www.npci.org.in/PDF/npci/knowledge-center/partner-whitepapers/Unified-Payments-Interface-(UPI)-A-payment-solution-designed-to-transform-economies-of-the-21st-Century.pdf)
8. Patel, R., & Rao, A. (2022). Digital Payments in India: Growth, Challenges, and Future Prospects. *Journal of Financial Innovations*, 15(3), 45–62.
9. Reddy, S., & Singh, P. (2022). Enhancing UPI security through encryption and authentication mechanisms. *Cybersecurity Advances*, 9(1), 110-126.
10. Reserve Bank of India. (2019). Trends and Progress of Banking in India. *RBI Publications*.
11. Sharma, P., & Gupta, K. (2021). The Impact of UPI on Financial Inclusion in India. *International Journal of Economic Studies*, 28(4), 112–130.
12. The Economic Times. (2023). 70% of MSMEs believe UPI will be the driver of retail sales. <https://economictimes.indiatimes.com/small-biz/sme-sector/70-msmes-believe-upi-will-be-the-driver-of-retail-sales/articleshow/100269206.cms>