

# A Review on Unified Payment Interface & Cashless Economy

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## ABSTRACT

The cashless economy and universal payment interface (UPI) in the State of Haryana are the main topics of this study. The National Payments Corporation of India (NPCI) created the Unified Payments Interface (UPI), an instant real-time payment system. The interface makes it possible to conduct P2P and P2M transactions between banks. It allows for the immediate transfer of money between two bank accounts using mobile devices. This study primarily focuses on those who transfer payments through UPI. The impact of user experiences with the universal payments interface (UPI) system on usage patterns in the State of Haryana will be investigated. This essay discusses the current evolution of India's transition to a "Faceless, Paperless, and Cashless" economy over the past few years. The changes that are primarily focused on convenience, competition, and cost-effectiveness are made possible by digital payments.

*Keywords: UPI, Cashless Economy, Digital Technology, Diffusion Theory etc.*

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## INTRODUCTION

Due to the ongoing advancements in information technology, the banking sector is experiencing a significant change in its delivery channel, just like every other sector. To maintain a competitive edge, financial institutions offer their clients a variety of cutting-edge goods. The focus has shifted away from branch banks and toward IT-based channels. For the needs of their clients, banks offer a variety of IT-based services, including internet banking, ATMs, and mobile banking. Mobile banking was the newest and most efficient kind of banking in the twenty-first century. India is one of the nations with a growth in internet and mobile subscriptions.

The "Digital India" program was crucial to the development and competition of the Indian banking sector. Indian banks are increasingly offering their customers cutting-edge platforms through which to access financial services. Previously, in order to use any service, the consumer had to go to a branch. The traditional banking system has evolved as a result of mobile and online banking. The customer can now take advantage of services with little to no branch visits now. The most valuable and devoted consumers of the banks are seen using both traditional and digital banking services, like electronic banking. The national payments corporation of India (NPCI), which serves as a regulatory body for payments and settlement in India, introduced a new payment system as the Unified Payment Interface (UPI) in India in 2016. This is a home grown payment system developed by NPCI for immediate transactions. The real-time (P2P) movement of money from one person to another is made possible by this payment system (UPI).

The following is the order of this paper: The growth of UPI and its characteristics are covered in Section II. A literature review based on UPI and the cashless economy is presented in Section III. Section IV presents the motivation, while Section V explains the conclusion.

## RISE OF UPI

The National Payments Corporation of India (NPCI) introduced UPI in 2016, and since then, it has revolutionized how Indians conduct business. There are currently 500 million merchants who accept payments through UPI, and 300 million UPI users. Users can link several bank accounts to a single mobile application using this payment infrastructure, enabling real-time and peer-to-peer transactions with just a few taps on a smartphone. In collaboration with banking partners, TPAP (third-party application providers) like Google Pay, Amazon Pay, PhonePe, and Paytm provide frictionless financial transactions by connecting over 300 banks. Due to its accessibility and ease of use, UPI has gained tremendous popularity across the country, bridging the divide between urban and rural areas.

### ***A. Encourage Financial Inclusion***

The capacity of UPI to empower even the most disadvantaged societal groups is one of its main advantages. By enabling quick and simple transactions, UPI has been instrumental in bringing millions of unbanked and underbanked people into the mainstream banking system. This has made it possible for people to have a stable financial future by opening up channels for financial services including savings accounts, loans, and insurance. By giving them access to a convenient, affordable, and secure digital payment infrastructure, UPI has enabled small companies, street sellers, and rural communities.

### ***B. Economic Growth Catalyst***

UPI has an influence that goes beyond financial inclusion because it has become a driving force for economic expansion and advancement. By decreasing the reliance on cash transactions, UPI has helped the shift to a transparent and accountable economy. The expansion of fintech start-ups and companies has been fueled by the availability of transaction data through UPI, promoting financial industry innovation and opening up job prospects.

### ***C. Seamless Interoperability and Integration***

The success of UPI can be due to both its easy compatibility with several third-party applications and its seamless integration across numerous banking platforms. The open design of UPI enables developers to produce creative solutions, leading to a broad ecosystem of UPI-enabled apps that provide a variety of services, including fund transfers, online shopping, and bill payment. This interoperability has made it unnecessary to use numerous payment apps and has streamlined the user experience, allowing people to easily transact across many platforms.

### ***D. Innovation and Future Prospects***

The user experience was further improved with the release of UPI 2.0, which added new capabilities such as overdraft facility, invoice payments, and signed intent. Numerous recent developments, such as the ability to lend through the UPI stack, enable RuPay card attachment to UPI, connect UPI to PPI, and raise interchange income for prepaid cards to 1.1% of GMV and credit cards to 1.5% of GMV, demonstrate how UPI is constantly changing. The NPCI's dedication to staying on top of technical developments and meeting the evolving requirements of the Indian populace is reflected in this next level of innovation. Additionally, with the advancement of offline payments, UPI Lite, UPI QR being interoperable, and CBDC QR being supported in the future days, there will be a lot of opportunities for Fintechs and other developments.

## **LITERATURE SURVEY**

Based on the Diffusion of Innovation (DOI) theory, Fahad et al. [1] presented a focus on factors that influence Indian customers' adoption of UPI in order to get a specific outcome regarding usage and recommendation intents. The study's findings showed a substantial positive correlation between users' intention to use UPI and relative advantage, complexity, and observability—the three primary factors influencing adoption of UPI. Higher satisfaction and inclination to use are also positively correlated with existing users' recommendations of UPI. In general, the study methodology aids in understanding how various UPI features affect usage and recommendation intentions.

The goal of Bharath et al. [2] was to examine consumer preferences in Chennai with regard to the Unified Payment Interface (UPI). The National Payments Corporation of India (NPCI) created the Unified Payments Interface (UPI), an instant real-time payment system. The interface makes it possible to conduct P2P and P2M transactions between banks. It allows for the immediate transfer of money between two bank accounts using mobile devices. 100 respondents who lived in Chennai city answered a structured questionnaire as part of the study's quantitative research methodology. The survey asked questions about a variety of topics, including awareness, usage, satisfaction, and preference for UPI-based payments. According to the study's findings, a significant portion of respondents were aware of and preferred payments through, with over 61% choosing payments over UPI.

Dhivya et al. [3] made an effort to track the development of this platform in order to understand its significance and current position. In order to analyze the trajectory of UPI's development by highlighting its singularity, the reasons for its evolution, and the difficulties faced to constructively disrupt the sustainability of this product, the study employed the descriptive method and used secondary data from a variety of scientific articles, pertinent reports, records, books, published data, and journals. It is a cutting-edge online financial product from India that has quickly risen to prominence.

Digital banking is made easier by Unified Payment Interface (UPI), according to Vij et al. With its affordable and cutting-edge characteristics, it plays an important part in the Indian economy. Financial inclusion truly focuses on providing the less fortunate segments of society with basic financial solutions. Since they do not meet the prerequisites for such services, people cannot obtain bank services even if they are aware of banks and their offerings. These socially disadvantaged individuals may not have the requisite documents, such as identification or income verification, and even they may not understand their significance. Due to these obstacles, they were unable to use bank credit facilities and had to rely on disorganized financing sources, where they were taken advantage of by affluent landlords pretending to be able to help them out financially. The Government of India developed several programs, including the Pradhan

Mantri Jan Dhan Yojana (PMJDY), Atal Pension Yojana (APY), Pradhan Mantri Mudra Yojana (PMMY), etc. to overcome these impediments and offer financial solutions to this portion after significant research and preparation.

Rastogi et al.'s [5] goal was to investigate the effects of UPI on financial inclusion, financial literacy, and the economic advancement of the underprivileged in India. In order to study the route analysis of the pertinent concept and establish the relationship, structured equation modeling is used in the paper. To collect the data for the study, an interval scale questionnaire was administered. It has been discovered that UPI affects financial literacy. Additionally, it has been discovered that financial literacy has a large effect on financial inclusion, which in turn has a significant impact on economic growth. Furthermore, financial stability has a role in mediating the significant relationship between financial literacy and financial inclusion, and trust also plays a role in the significant relationship between financial inclusion and economic development. The study's key finding is that UPI benefits individuals in various ways.

The goal of Baliyan et al. [6] was to analyze the Indian UPI payment system and its possible place in the ecosystem of digital payments. The purpose of this study is to analyze the acceptance and usage rates of UPI in India as well as the potential uses of UPI in digital payments in the future. Online surveys and literature reviews were two of the primary and secondary sources used to get the data. This study shows that UPI has gained popularity in India as a means of payment, with rising acceptance and usage rates. With anticipated sustained development, innovation, and expanded acceptance, UPI's future in India is bright. This study shed important light on UPI's potential in the ecosystem of digital payments and its function in India's plan for a paperless society.

According to Prakasha et al. [7], a user can link multiple bank accounts using a UPI app on their smartphone to easily conduct financial transfers and submit collect requests around-the-clock, every day of the year. This essay's goal is to investigate how well-aware, preferred, and satisfied university students in Madikeri City are with UPI. The sample size is 120, and percentage analysis has been employed for this purpose.

The study's findings demonstrate that respondents are aware of the system due to its simplicity, user-friendliness, security, and cash-back offer. Google Pay and Amazon Pay are the most popular and least popular apps, respectively, and the majority of respondents use UPI apps primarily for financial transfers. It is advised that further promotional efforts be launched to increase user engagement in order to make the "Digital India" program successful and enable India to become digitally empowered.

According to Kakade et al. [8], UPI is a payment system developed by National Payments Corporation of India and governed by the Reserve Bank of India that enables real-time financial transfers between two bank accounts on mobile devices. To transfer money using a Virtual Payment Address (a special ID issued by the bank), an Account Number with an IFS Code, a Mobile Number with an MMID (Mobile Money Identifier), an Aadhaar Number, or a one-time use Virtual ID, UPI is built on IMPS. Each payment must be confirmed using an MPIN (Personal Identification Number for Mobile Banking). Individuals can now do digital transactions as easily as texting. Service is available around-the-clock, unlike RTGS and NEFT, which are unavailable on holidays or outside of normal business hours. This will greatly increase system efficiency and aid India's transition to a fully cashless society.

A cashless economy, according to Patil et al. [9], is a form of payment where products and services are purchased and paid for using digital media rather than actual money. A financial system is referred to as a "cashless economy" if it primarily relies on electronic payment mechanisms as debit cards, credit cards, e-wallets, electronic checks, and direct wire transfers between accounts. According to the Indian government, doing away with cash will spur economic expansion, reduce the risk of theft, and make handling money safer for everyone. Cashless transactions may boost the number of international buyers visiting the country while also decreasing coinage-related corruption. The concept and application of cashless transactions in India were investigated in this article. Also thoroughly examined are the benefits and drawbacks of a cashless society for the average person.

The impact of users' experiences with the universal payments interface (UPI) system on the central bank digital currency (CBDC) usage behavior in India was investigated by Gupta et al. [10]. In order to study the links between technology, cognitive characteristics, and behavioural intentions regarding CBDC use, our research created a novel conceptual framework. The framework included models of behavioural intents and use behaviours that took into account UPI usage experience as a moderator. During the CBDC pilot launch, we ran a poll in significant Indian cities to gather data.

It examined the proposed model and the connections between the components using a partial least squares structural equation model (PLS-SEM). Our research showed that hedonic motivation and performance expectations had a substantial influence on users' behavioural intentions toward CBDC. The use of CBDC was also significantly influenced by social factors. Furthermore, we discovered that prior UPI use adversely influenced the links between behavioural intention and use behavior as well as the links between social influence and performance expectation.

**Table 1: Summary of Survey on UPI**

Author	Context of Study	Conclusion
Fahad, M.Shahid	Adoption of UPI in India	higher intention to use and satisfaction positively correlates with the recommendation of UPI by existing users
N Bharath	Consumer Preference of UPI	Awareness and preference of payments through were high among respondents, with over 61 % preferred payment over UPI.
Dhivya M, Dr. Balamourougane R	descriptive method by using secondary data on UPI	UPI stands at the top of the payment system in India with more than 50% of payments have been done by adopting it and surpassing the other modes of digital payments aggressively.
R. Vij	UPI Stimulates Financial Inclusion	The launch of UPI by NPCI has added to Indian Payment system with online real time payments.

### MOTIVATION OF STUDY

The theoretical and practical components of UPI have received more attention in prior works. The implementation of UPI in India has not been the subject of any studies. Therefore, it's also necessary to investigate the effects of UPI adoption-related aspects. The intentions of consumers toward UPI have not been thoroughly investigated. As a result, there is a critical need to evaluate the actual adoption position of UPI in India due to the absence of research. As a technology-based service platform, UPI requires a study on its acceptance based on innovation adoption theory, which serves as the driving force for this research.

Based on the diffusion of innovation theory, this study aims to explain the adoption intentions of UPI and cashless economy users. The primary goal of this work is to analyze how cashless transactions affect an economy's ability to grow economically. According to the Diffusion of Innovation (DOI) theory, the emphasis has shifted to the factors that influence customer adoption of UPI in order to get a certain outcome regarding usage and recommendation intentions. Nevertheless, this study aims to investigate how actual users behave toward UPI and the paperless economy.

### CONCLUSION

When it comes to India's search for a digital future, UPI has proven to be a game-changer. UPI has changed the way Indians conduct business by facilitating seamless, secure, and inclusive transactions. This has empowered millions of people and stimulated the economy. As UPI develops and innovates, its digital dynamo is poised to catapult India even further into the future and leave a lasting imprint on the world of digital payments. India's payment industry has undergone a transformation thanks to UPI, which is also making it easier for Indians who don't live there to transact. India and Singapore have connected their digital payment systems, UPI and PayNow, enabling quick and affordable fund transactions, in an effort to significantly reduce the cross-border movement of money between the two nations.

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