

ADOPTION OF UPI AND ITS IMPACT ON CASHLESS TRANSACTION IN INDIA

Dr. Sandip Jaysukhbhai Makvana

Adhyapak Sahayak

Shree G.K. & C.K. Bosamia Arts and Commerce College - Jetpur

ABSTRACT

The **Unified Payment Interface (UPI)** platform has been in use in India since 2016. The quick growth of the UPI in India is investigated in this study as well as its transformational effect on the nation's move toward a cashless society. UPI has transformed the way consumers and companies conduct financial operations as a real-time digital payment system created by the National Payments Corporation of India. UPI has become the foundation of India's digital finance ecosystem as Smartphone adoption, internet access, and governmental support via programs like Digital India rise. It was introduced to facilitate easy, quick, and secure online payments between banks. The main implication of UPI is that it helps people in multiple ways. It is not only supporting financial literacy but also contributing to financial inclusion and the economic development of the poor. Cashless payments have the potential to spur economic growth, and digital payments can have a positive impact on economic growth as they facilitate transactions, reduce costs, and improve efficiency. This study will explore the UPI ecosystem in India. It will shed light on the trends and relationships between data usage trends, digital transactions, digital payments, and the number of internet users in India.

Keywords: NPCI, Digital Payments, Cashless Payments, UPI, Financial Inclusion.

1. INTRODUCTION

The **Unified Payments Interface**, launched in **2016** by the National Payments Corporation of India (NPCI) under the guidance of the Reserve Bank of India (RBI) and the Indian Government, has transformed the way money is moved and spent in India. Designed as a real-time, seamless digital payments system, UPI enables instant inter-bank transfers using simple identifiers like mobile numbers or QR codes. Today, it plays a central role in India's digital ecosystem and is a key driver of the nation's shift toward a **cashless economy**.

India has witnessed a rapid transformation in its payment systems with the growth of digital technologies. The introduction of the **UPI** has played a crucial role in promoting **Cashless Transactions** across the country. Launched by the National Payments Corporation of India, UPI enables instant, secure, and convenient money transfers through mobile phones without the need for cash or physical bank details. By simplifying digital payments and increasing accessibility for individuals and businesses, UPI has significantly reduced dependence on cash and accelerated India's journey toward a digital and cashless economy.

2. REVIEW OF LITERATURE

The literature on the **UPI** highlights its central role in shaping the digital payment ecosystem and promoting cashless transactions in India. Researchers have examined multiple aspects such as adoption drivers, financial inclusion, consumer behaviour, technological challenges, and economic impact.

▪ **UPI Adoption: Features and Growth**

A major review on the adoption of UPI emphasizes its real-time payment capabilities, interoperability across banks, and user-friendly interface as key factors driving rapid adoption in India. This study also discusses UPI's contribution to expanding financial inclusion and reducing cash usage, showing that the system has become integral to India's digital payment infrastructure.

Another research article explores the transformation brought by UPI and other digital payments, linking the rise of UPI to broader trends in consumer behaviour. It notes that government initiatives like Digital India and Jan Dhan Yojana laid the foundation for cashless transactions, while platforms such as PhonePe, Google Pay, and Paytm accelerated everyday usage.

▪ **Adoption Drivers and Consumer Perspectives**

Several studies investigate factors influencing UPI adoption. One review highlights demographic, technological, economic, and policy-related determinants that shape consumer acceptance of digital payments, including UPI. It underscores how Smartphone penetration, internet access, and perceived usefulness influence adoption decisions.

A specific empirical study conducted in Bhagalpur, Bihar, and reports widespread acceptance of UPI across diverse user groups for activities like money transfers and bill payments, noting preferences for apps like PhonePe. It also identifies usage patterns related to education and income levels.

▪ **UPI Impact on Cashless Economy**

Research focusing on the technological shift brought by UPI describes it as a catalyst for India's move toward a **cashless economy**. These studies document how the platform has changed payment habits, reduced dependence on cash, and integrated digital transactions into daily life, especially after COVID-19.

Another article elaborates on the ecosystem-wide benefits of UPI, such as lowering transaction costs, helping MSMEs grow through digital acceptance, and streamlining financial interactions, which altogether strengthen the formal economy.

▪ **Comparative and Sector-Specific Analyses**

Some research contrasts behaviour between UPI users and non-users, especially in unorganized retail sectors, highlighting how UPI and QR payments often outperform conventional payment methods in terms of convenience and speed.

Additionally, broader literature on cashless commerce notes ongoing challenges in shifting from traditional cash-based systems, with cultural preferences and infrastructural gaps still affecting full adoption.

▪ **Theoretical Models and Adoption Frameworks**

Recent academic work applies established behavioral frameworks such as the Unified Theory of Acceptance and Use of Technology (UTAUT) to study users' intentions to use UPI. This research models how perceived benefits, trust, and promotional efforts influence adoption decisions among Indian consumers.

❖ **The literature shows that UPI has:**

- **Accelerated digital adoption** and significantly contributed to cashless transactions in India.
- **Improved financial inclusion** by enabling easy digital access for various demographic groups.
- **Impacted everyday economic activity** from individual behaviour to merchant practices.
- **Presented challenges** such as security concerns and infrastructural barriers that require ongoing attention.

3. OBJECTIVE OF THE STUDY

- 1) To understand the concept and working of the Unified Payments Interface (UPI) in India.
- 2) To analyze the growth and adoption of UPI as a digital payment system.
- 3) To examine the role of UPI in promoting cashless transactions in India.
- 4) To study the impact of UPI on reducing the use of physical cash in daily transactions.
- 5) To evaluate the contribution of UPI to financial inclusion and digital literacy.
- 6) To identify the advantages of UPI for consumers, merchants, and businesses.
- 7) To analyze the challenges and limitations associated with UPI-based transactions.
- 8) To assess the future potential of UPI in strengthening India's digital economy.

4. ADOPTION AND RAPID GROWTH OF UPI

The adoption of the **Unified Payments Interface** in India has grown rapidly since its launch in 2016. UPI has become one of the most widely used digital payment systems due to its simplicity, speed, and security. It allows users to transfer money instantly using mobile phones without the need for cash, cards, or bank details. The increasing availability of Smartphone, affordable internet services, and strong government support for digital payments has further accelerated UPI adoption.

UPI is widely accepted by merchants, small shopkeepers, service providers, and e-commerce platforms, making it a preferred mode of payment for both low-value and high-value transactions. Its ease of use has encouraged people from urban as well as rural areas to adopt digital payments, contributing significantly to financial inclusion and the growth of a cashless economy in India.

5. RECENT UPI AND CASHLESS TRANSACTION IN INDIAN

Here's a clear snapshot of the **Current Situation (2025-26)** with UPI and the broader move toward **Cashless transactions in India** based on the latest available data and policy updates:

1) UPI: India's Digital Payment Engine:

Massive Adoption & Scale

- India's UPI is now the **world's largest real-time digital payment system** handling about **50% of all real-time payments globally** and far more volume than other networks like Visa.
- In **2025**, UPI processed **hundreds of billions of transactions** with total annual volumes near **₹300 lakh crore (~₹30 trillion)**.
- On a **daily basis**, Indians now make **600–700+ million UPI transactions every day**.

Share in India's Digital Payments

- Around **85% of all digital transactions in India** happen through UPI, showing its overwhelming dominance over NEFT, cards, etc.
- NPCI data shows **UPI handles around 1,800+ crore (~18 billion) transactions per month**.

Who Uses It?

- Tens of **crores of individual users** and **millions of merchants** across big cities and small towns are on UPI.
- It's not just big cities - small kirana shops, taxis, buses, toll plazas and neighbourhood vendors accept UPI payments.

2) Why UPI Surged & What It Means

Easy & Inclusive

- UPI lets users pay using a simple **Virtual Payment Address (VPA)** no need for IFSC or full bank details.
- Many apps (PhonePe, Google Pay, Paytm, BHIM, etc.) make it affordable and fast for transfers, bills, shopping and more.

Low Costs

- Most UPI transactions have **zero or very low fees**, which encourages both customers and small merchants to use digital payments.

Everyday Use

- UPI isn't just peer-to-peer anymore it's used for **utility bills, shopping, dining, travel, fuel, tolls, and services**.
- From 1 April 2026, **cash will be phased out at national highway toll booths** only UPI or FASTag accepted.

3) Cash vs. Cashless: How Things Are Changing

Cash Still Exists

- Cash hasn't disappeared completely in many small shops and among older customers, notes and coins are still used regularly.
- But in urban & semi-urban transactions, UPI is increasingly preferred for speed and record-keeping.

Behavioral Shift

- Many Indians now **rarely carry cash** because digital payments are so convenient.
- Some users and economists point out that UPI's ease can also change spending habits (by making money feel less tangible).

4) Safety, Innovation & Policy

Security Enhancements

- The government and NPCI are working on **safety features** like an "emergency button" to stop UPI fraud quickly.
- Discussions are ongoing about adding **biometric authentication** (face/fingerprint) to UPI payments.

New Entrants & Features

- Apple Pay with a "Tap to Pay" feature is launching in India, adding more choices for digital wallets, especially on iPhones.

Innovation beyond Payments

- UPI is expanding into credit, lending and merchant services helping small businesses and broadening financial inclusion.

6. CHALLENGES AND CONCERNS OF UPI

While UPI's growth story is impressive, there are a few challenges:

- **Digital Divide:** Despite gains, digital literacy and access still vary across income groups.
- **Cyber security Risks:** Increased digital transactions mean higher exposure to fraud if not properly managed.
- **Market Concentration:** A few apps dominate market share, raise regulatory and competition concerns.

7. ADVANTAGES OF ADOPTION OF UPI

Convenience and Speed: UPI enables instant money transfer anytime and anywhere using a Smartphone.

Cashless and Paperless Transactions: It reduces the need for physical cash, debit cards, and paperwork.

Low Cost: Most UPI transactions are free, making it affordable for users and small merchants.

Financial Inclusion: UPI helps bring rural and unbanked populations into the formal banking system.

Wide Acceptance: Accepted by small shops, street vendors, and large businesses across India.

Secure Transactions: Uses multi-layer security like PIN authentication and encryption.

Supports Digital Economy: Encourages transparency and boosts the growth of India's digital economy.

8. DISADVANTAGES OF ADOPTION OF UPI

Dependence on Internet and Smartphone: Requires internet connectivity and a Smartphone, limiting access for some users.

Cyber Fraud and Security Risks: Risk of phishing, fake links, and unauthorized access if users are careless.

Technical Issues: Server downtime or failed transactions can cause inconvenience.

Digital Literacy Gap: Many users lack awareness about safe digital payment practices.

Privacy Concerns: User data may be exposed if apps are misused or compromised.

Transaction Limits: Daily and per-transaction limits may restrict high-value transfers.

9. IMPACT ON CASHLESS TRANSACTIONS IN INDIA

The growth of digital payment systems, especially the UPI, has had a significant impact on cashless transactions in India. Cashless payments have transformed the way individuals, businesses, and the government conducts financial transactions.

Reduction in Cash Usage: The increased adoption of digital payment methods has reduced dependence on physical cash, especially for small and everyday transactions such as shopping, transport, and bill payments.

Increased Financial Inclusion: Cashless transactions have enabled people from rural and remote areas to access formal banking services, helping integrate unbanked populations into the financial system.

Convenience and Speed: Digital payments allow instant money transfers anytime and anywhere, improving efficiency and saving time for consumers and businesses.

Growth of Digital Economy: Cashless transactions support e-commerce, online services, and startups, contributing to economic growth and modernization.

Transparency and Accountability: Digital transactions create transaction records, reducing black money, tax evasion, and corruption.

Boost to Small Businesses: Small traders and vendors can accept digital payments easily, increasing sales and reducing cash-handling risks.

Improved Government Services: Cashless payments facilitate direct benefit transfers, subsidies, and welfare payments directly into beneficiaries' bank accounts.

Challenges Remain: Despite growth, challenges such as digital illiteracy, cyber security threats, and unequal internet access still affect the complete transition to a cashless economy.

10. ADVANTAGES OF CASHLESS TRANSACTIONS IN INDIA

Convenience and Speed: Cashless transactions allow instant payments anytime and anywhere, saving time and effort.

Reduced Dependence on Cash: Minimizes the need to carry physical money, reducing risks of theft and loss.

Financial Inclusion: Helps bring unbanked and rural populations into the formal banking system.

Transparency in Transactions: Digital records reduce black money, corruption, and tax evasion.

Growth of Digital Economy: Encourages e-commerce, startups, and digital innovation in India.

Ease for Businesses: Merchants can receive payments quickly and manage finances efficiently.

Support for Government Schemes: Enables direct benefit transfers and cashless payment of taxes and bills.

Cost Efficiency: Reduces costs related to printing, handling, and transporting cash.

11. DISADVANTAGES OF CASHLESS TRANSACTIONS IN INDIA

Digital Divide: Limited access to Smartphone, internet, and digital literacy in rural areas.

Cybersecurity Risks: Increased chances of online fraud, hacking, and data theft.

Technical Problems: Network issues or server failures can disrupt transactions.

Privacy Concerns: Personal and financial data may be misused if security is compromised.

Dependence on Technology: System failures or power cuts can halt transactions.

Hidden Charges: Some platforms may charge fees for certain transactions or services.

Resistance to Change: Elderly and less tech-savvy users may find digital payments difficult.

12. CONCLUSION

The adoption of UPI has reshaped India's payment landscape. By making digital transactions fast, affordable, and accessible to millions, UPI has accelerated the growth of **cashless transactions**, enhanced financial inclusion, and powered India's transition into a digital economy. Its success stands as a model for other nations aiming to expand digital financial services. **UPI leads India's move toward a cashless economy** dominating digital payments and shaping how Indians pay for everyday things. It's widely adopted, affordable, fast and used across cities, towns and villages. Cash still exists, especially in small value or informal settings, but digital is becoming default for many. Safety, convenience and new features (like toll-only digital payments) are accelerating the trend.

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