JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Impact of UPI Transactions on the Growth of Digital Banking in India.

Author Details:-

1). Name :- Jayanta Devnath

2). Research Scholar

3). PH.D IN COMMERCE

4). SIKKIM SKILL UNIVERSITY

5). jayantadevnath707@gmail.com

6). Mobile:- 9142575902

Co- Author Details:-

1).Name :- Kumari Anisha Rai

2). Research scholar

3).PH.D. IN COMMERCE

4). SONA DEVI UNIVERSITY, JHARKHAND

5). kumarianisharai3@gmail.com

6). 9905636373

ABSTRACT:

This study examines the transformative impact of the Unified Payments Interface **(UPI)** on the structural evolution of digital banking in India from 2017 to 2026. Utilizing a descriptive and analytical research design based on secondary data from the Reserve Bank of India **(RBI),** National Payments Corporation of India (**NPCI),** and Pradhan Mantri Jan Dhan Yojana **(PMJDY),** the paper evaluates how **UPI** catalyzed financial inclusion from passive account creation to active daily digital usage. Grounded in the public **JAM** (Jan-Dhan, Aadhaar, Mobile/RuPay) architecture and private fintech distribution, India successfully converted dormant accounts into active transaction hubs.

Between 2017 and 2026, operative Jan-Dhan accounts rose to 92.8%, zero-balance accounts dropped from 24.2% to 5.5%, and total **PMJDY** deposits grew 4.5x to ₹2.88 lakh crore. Concurrently, annual UPI transactions surged from 0.02 billion to 215 billion, peaking at 23.66 billion monthly transactions (₹29.9 lakh crore) in July 2026, with PhonePe and Google Pay commanding over 78% of the volume. The study concludes that while public digital infrastructure provides the baseline for inclusion, private fintech channels drive sustained consumer adoption. To maintain momentum and security, financial institutions must pivot physical branch operations toward high-margin advisory services, upgrade server and cybersecurity infrastructure, and deepen rural financial literacy.

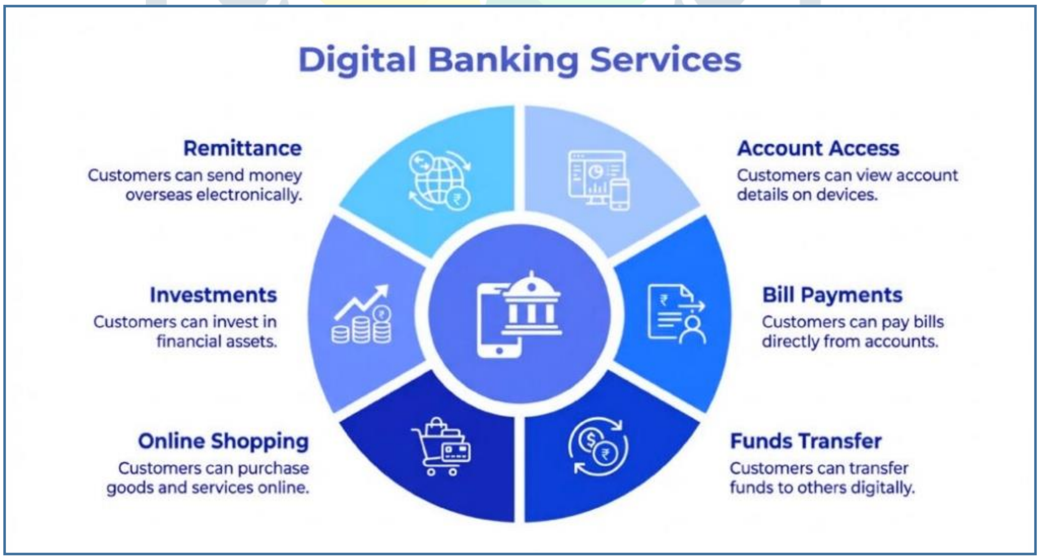
KEYWORDS: Unified Payments Interface (UPI), Financial Inclusion, PMJDY (Pradhan Mantri Jan Dhan Yojana), Digital Banking, JAM Trinity, NPCI, Fintech Distribution, Digital Payments India.

INTRODUCTION:

The landscape of retail payments and banking in India has undergone a profound paradigm shift over the last decade. Historically dominated by cash transactions and constrained by physical branch infrastructure, India's financial ecosystem has rapidly evolved into one of the world's most sophisticated and high-volume digital payment networks. At the core of this structural evolution is the Unified Payments Interface **(UPI),** a real-time payment system developed by the National Payments Corporation of India **(NPCI)** and regulated by the Reserve Bank of India **(RBI).** Launched as part of India's broader vision for a "cash-lite" economy, **UPI** has fundamentally redefined how capital moves across micro-transactions, merchant exchanges, and peer-to-peer **(P2P**) transfers. The catalyst for this expansion lies within India's foundational **JAM** trinity—Jan Dhan accounts, Aadhaar digital identity, and Mobile connectivity—coupled with the integration of RuPay debit card architecture. While the Pradhan Mantri Jan Dhan Yojana (**PMJDY**) successfully expanded bank access to hundreds of millions of unbanked citizens, initial challenges persisted regarding low account utilization and high rates of dormancy. The emergence of UPI, alongside a vibrant ecosystem of private fintech distributors, transformed these static accounts into active, daily digital transaction hubs. By seamlessly bridging public digital infrastructure with competitive private channels—dominated by platforms such as **PhonePe** and **Google Pay**—**UPI** lowered transaction costs to near-zero, eliminated entry friction for micro-merchants, and created an interoperable payments framework. Consequently, between 2017 and 2026, the Indian banking sector witnessed an unprecedented surge in digital engagement, marked by a sharp decline in zero-balance Jan Dhan accounts, a multi-fold increase in formal deposits, and exponential growth in monthly digital transaction volumes. However, this rapid transition from passive account creation to high-frequency usage poses crucial strategic questions for traditional financial institutions. As digital payment volume scales into hundreds of billions of annual transactions, commercial banks face dual pressure: managing server loads and cybersecurity threats on zero-**MDR** (Merchant Discount Rate) rails, while re-evaluating the physical branch model in an increasingly app-centric ecosystem.

CONCEPT OF DIGITAL BANKING IN INDIA:

Digital Banking in India is the complete digitisation of retail and institutional banking, transitioning the country from a cash-heavy economy to a world leader in real-time, population-scale digital transactions. Driven by the JAM Trinity (Jan Dhan, Aadhaar, Mobile), open-API Digital Public Infrastructure (DPI), and aggressive regulatory backing from the Reserve Bank of India (RBI), India's digital banking model is unique for its interoperable, low-cost, and open framework.



Key Pillars Driving The Ecosystem:

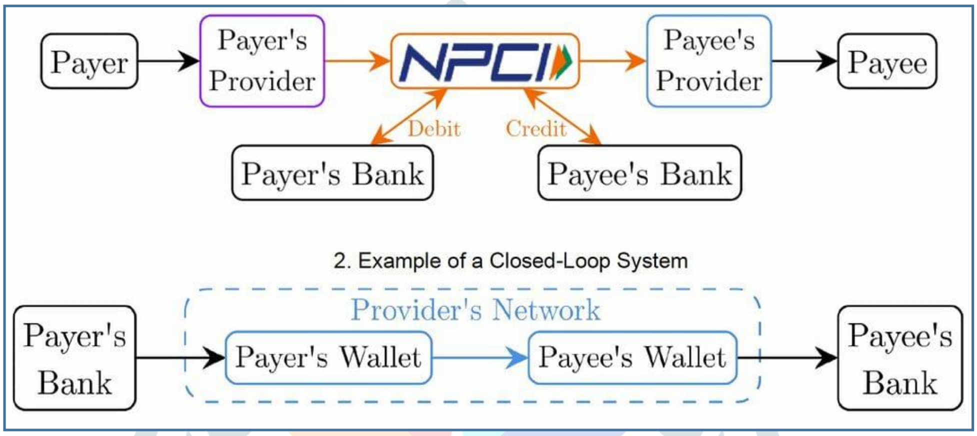
Digital Public Infrastructure (India Stack): Built on three distinct layers:

- **Identity Layer**: Aadhaar-enabled e-KYC for paperless, remote customer on boarding.
- **Payments Layer**: Interoperable payment rails managed by NPCI, including UPI, IMPS, AePS, and NEFT/RTGS.
- **Data Layer**: The Account Aggregator (AA) framework enabling consent-based data sharing for instant credit underwriting.

- **DBUs (Digital Banking Units):** Specialized, paperless brick-and-mortar hubs mandated by the RBI in rural and semi-urban areas to bridge the digital literacy divide.
- **Fintech & Neobanking Integration**: Partnership models where legacy banks expose open APIs to non-banking entities for instant lending, micro-investments, and embedded finance.
- Central Bank Digital Currency (CBDC): The RBI's Digital Rupee (e) serving as a sovereign digital alternative to physical cash.

NPCI:

The National Payments Corporation of India (NPCI) is an umbrella organization created to operate and manage retail payment and settlement systems across India.
Established in 2008 as a joint initiative of the Reserve Bank of India (RBI) and the Indian Banks' Association (IBA), it functions as a non-profit company under Section 8 of the Companies Act, 2013. Its primary goal is to provide a robust, secure, and accessible digital payments infrastructure for the entire nation.

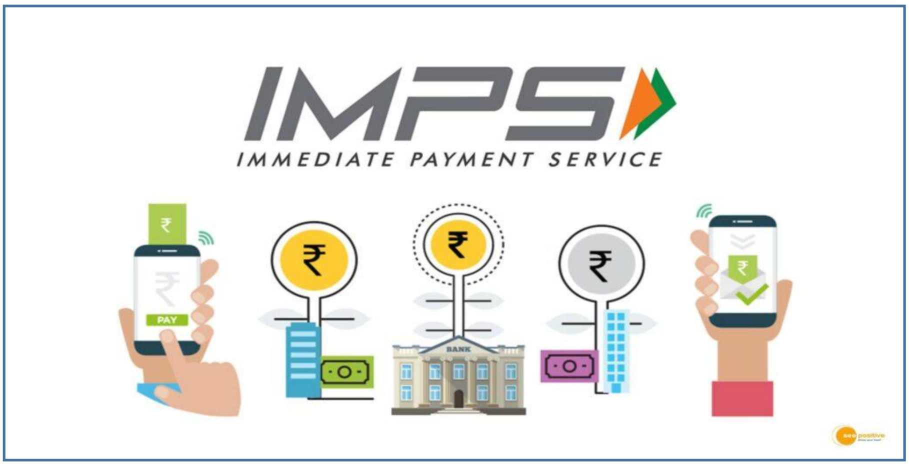


Key Innovations Developed by NPCI:

- **Unified Payments Interface (UPI):** Enables real-time, instant mobile-to-mobile money transfers across banks using a virtual address.
- **RuPay**: India's domestic card payment network, offering an alternative to Visa and Mastercard.
- **IMPS (Immediate Payment Service):** Provides 24/7 real-time interbank fund transfer services via mobile phones, net banking, and ATMs.
- **Aadhaar Enabled Payment System (AePS):** Facilitates basic financial transactions at micro-ATMs using Aadhaar authentication to drive financial inclusion.
- **FASTag (NETC):** Enables automated toll collection at highway booths via RFID technology.
- **BHIM (Bharat Interface for Money**): A mobile payment app built directly on the UPI platform.

Through these platforms, NPCI has been the driving force behind India's transition toward a cashless digital economy.

IMPS:
Immediate Payment Service (IMPS) is an instant, 24/7 electronic funds transfer system operated in India by the National Payments Corporation of India (NPCI). Launched on November 22, 2010, IMPS allows individuals to transfer money instantly between bank accounts across India at any time—including weekends and public holidays—unlike traditional banking clearing cycles



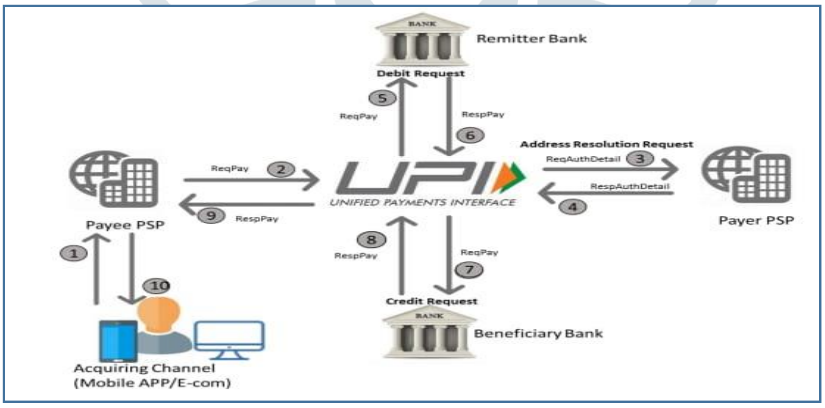
Key Characteristics:

- **24/7 Availability:** Functions 365 days a year with instant credit to the beneficiary account.
- Flexible Transfer Channels: Can be initiated through Mobile Banking apps, Net Banking, SMS, and ATMs.
- **Transaction Identifiers**: Transfers can be made using:
  a).Account Number + IFSC.
  b). Mobile Number + MMID (Mobile Money Identifier, a 7-digit unique code issued by the bank).

- **Transaction Limit:** Generally allows transfers up to ₹5 lakh per transaction (per RBI guidelines), making it ideal for immediate high-value retail transfers.
- **Backbone Technology:** Forms the underlying engine that powered the initial architecture of UPI.

UNIFIED PAYMENTS INTERFACE (UPI) :

Unified Payments Interface (UPI) is a real-time, interoperable payment system developed by the National Payments Corporation of India (NPCI) in 2016 and regulated by the Reserve Bank of India (RBI).It allows instant money transfers between two bank accounts using a mobile device, combining multiple bank accounts, seamless fund routing, and merchant payments under a single interface



Core Mechanics & Architecture:

At its core, UPI abstracts complex traditional banking information (like Account Numbers and IFSC codes) into a single identifier.

1. **Virtual Payment Address (VPA / UPI ID)**
   - Eliminates the need to share confidential bank details.
   - Operates as a simple address (e.g., username@bank or mobilenumber@upi) tied directly to the user's underlying bank account.
   -

2. **Architecture (The 4-Pillar Model)**

A UPI transaction operates across a 4-party ecosystem routed via NPCI's central switch:

- **Payer PSP App:** The front-end mobile app used by the sender (e.g., PhonePe, Google Pay, BHIM, Paytm).
- **Remitter Bank (Issuer):** The sender's bank where funds are debited.
- **NPCI Switch:** The central clearing house and stateless routing engine.
- **Beneficiary Bank (Acquirer):** The recipient's bank where funds are credited.

3. **Two-Factor Authentication (2FA)**

- **Factor 1 (Device Binding):** The app binds to the mobile device's SIM card and hardware fingerprint.
- **Factor 2 (UPI PIN):** A 4- or 6-digit personal PIN required to authorize each debit transaction.

Key Operational Features:

- **Push & Pull Functionality:** Supports Push payments (sending money) and Pull payments (requesting or collecting money from another user/merchant).
- **Interoperability**: Users can link any bank account to any approved UPI application regardless of which bank holds the account.
- **Instant 24/7 Settlement:** Runs on top of the Immediate Payment Service (IMPS) infrastructure, enabling round-the-clock instant settlement.
- **QR Integration:** Utilizes static and dynamic Bharat QR codes for Person-to-Merchant (P2M) transactions.

OBJECTIVES OF STUDY:

A major, primary research objective (e.g., understanding the impact of UPI transactions on the growth of digital banking in India), along with smaller steps to achieve that main goal (e.g., analyzing UPI's growth rate, evaluating the impact on digital accounts).Based on the provided abstract, here are the full Objectives of the Study, structured into a primary objective and specific secondary sub-objectives:

- **Primary Objective:**

To evaluate the transformative impact of the Unified Payments Interface (UPI) on the structural evolution of digital banking and financial inclusion in India between 2017 and 2026.

- **Specific Objectives:**

1. **Assess Financial Inclusion Transitions:**

To analyze how the public JAM (Jan-Dhan, Aadhaar, Mobile/RuPay) architecture and UPI catalyzed the shift of bank accounts from passive ownership (dormancy) to active, daily digital transaction hubs.

2. **Evaluate Jan-Dhan Account Dynamics:**

To quantify the progress in Pradhan Mantri Jan Dhan Yojana (PMJDY) account metrics from 2017 to 2026, specifically measuring:

- The rise in the percentage of operative Jan-Dhan accounts (reaching 92.8%).
- The reduction in zero-balance accounts (from 24.2% down to 5.5%).
- The growth of total PMJDY deposits (expanding 4.5x to ₹2.88 lakh crore).

3. **Examine UPI Growth & Adoption Trends**: To map the growth trajectory of UPI transactions from 2017 to 2026, tracking annual volumes (rising from 0.02 billion to 215 billion) and peak monthly milestones (reaching 23.66 billion transactions valued at ₹29.9 lakh crore in July 2026).

4. **Analyze Market Concentration and Distribution Channels:**
To evaluate the synergy between public digital infrastructure and private market distribution by measuring market share concentration among leading fintech platforms (notably PhonePe and Google Pay commanding over 78% of total volume).

5. **Provide Strategic Recommendations for Financial Institutions:**
To formulate policy and operational frameworks for banks to sustain momentum and security, focusing on:

- Pivoting physical branch models toward high-margin advisory services.
- Upgrading server scalability and cybersecurity infrastructure.
- Deepening rural financial literacy initiatives.

LITERATURE REVIEW:

The literature surrounding the Unified Payments Interface (UPI) captures its evolution from a payment innovation into the foundational engine of India's digital banking infrastructure. Existing academic and institutional research organizes the impact of UPI across main themes:

(1). **Kumar, S. V., & Unnisa, N. (2024).**
This study will explore the Unified Payment Interface (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. The study also highlights the usage of UPI during the years 2020, 2021, and 2022. Policymakers can use the findings of this study to frame policy for UPI more effectively in the future. Kumar, S. V., & Unnisa, N. (2024). A study on UPI transactions in India. International Journal of Advances in Business and Management Research (IJABMR), 1(3), 8-22.

(2). **Sharma, A., & Piplani, N. J. I. R. (2017).**
In This study is analytical and based on secondary data. The concept of digital banking is still evolving in the Indian banking sector and is likely to bring numerous opportunities as well as unprecedented risks to the fundamental nature of banking in India. Thus, this paper also aims to present the opportunities and challenges of going digital in the Indian banking sector alongwith some recommendations to overcome these challenges. The paper concludes that in future, digital banking will not only be acceptable but the most demanded mode of conducting transactions. It will be useful to the academicians, banking and insurance personnel, financial advisors, professionals, students and researchers.Sharma, A., & Piplani, N. J. I. R. (2017). Digital banking in India: A review of trends, opportunities and challenges. International Research Journal of Management Science & Technology, 8(1), 168-180.

(3). **Sharma, A., Bhimavarapu, V. M., Kanoujiya, J., Barge, P., & Rastogi, S. (2022).**

In This study has established that FI impacts the UPI. The finance infrastructure thus helps to develop an ecosystem where financial access and the awareness level help people to transit to new channels of payment. We have used secondary data of 27 banks for sixteen quarters and four years, i.e., for the financial years 2016–17 to 2019–20. It is observed from the current study that the offsite_ATM plays a significant role in the value creation of the UPI. Our study implies that it will help retailers, individuals, and business houses to use UPI platforms for swift payments without hassle. Also helpful for industries that are still not digitally disrupted and industry-specific UPI transactions. Sharma, A., Bhimavarapu, V. M., Kanoujiya, J., Barge, P., & Rastogi, S. (2022). Financial Inclusion-An impetus to the digitalization of payment services (UPI) in India. The Journal of Asian Finance, Economics and Business, 9(9), 191-203.

(4). **Mandavi, N., Bhatia, H. S., & Gupta, O. P. (2026).**
In This study states that UPI’s boom can be attributed to a combination of factors that include interoperability, mobile access, QR-based payments, low cost, direct bank access, public-private collaboration, and network effects. For sustained growth, UPI must address fraud, ensure access and resilience, intensify competition, and establish the system with sustainable network effects. Mandavi, N., Bhatia, H. S., & Gupta, O. P. (2026).

UPI REVOLUTION IN INDIA: EXAMINING THE GROWTH AND TRANSFORMATION OF THE DIGITAL PAYMENT ECOSYSTEM. Int. J. Res. Commer. Manag. Stud, 8(04), 21-33.

(5). **Philip, B. (2019).**
In this study the researcher aims to identify the customer preference towards unified payment interface and to know the impact of unified payment interface in customer satisfaction. The researcher used Mean, F-Test, ANOVA and Regression analysis for analysing and interpreting the data. In this study reviled that there is a positive impact or perception by the customers towards unified payment interface. Philip, B. (2019). Unified payment interface–impact of UPI in customer satisfaction. Research Guru, 12(4), 124-129.

(6). **Kumaraguru, T.**
In This study examines the impact of digital payment on the goods sector. And also, this study examines the number of people who were used the digital payment at the time of purchasing the goods.This Paper uses secondary data make the research and some of the data are collected from the Reserve Bank of India (RBI) is the major regulatory organization in India in charge of supervising and controlling the digital payments in India. And analysed the impact of digital payment in goods sector the period of 2018-19 to 2022-23 (till 11th December 2023). Kumaraguru, T. IMPACT OF DIGITAL PAYMENT SYSTEM ON GOODS SECTOR.

(7). **Asopa, A., & Choudhary, K. R. (2025).**
This study uses secondary data on the Financial Inclusion Index, UPI, IMPS, AePS, and PMJDY. Descriptive statistics and correlation analysis show a strong link between growing financial inclusion in India and FinTech-driven digital payments, particularly UPI and IMPS. PMJDY role is significant as large number of accounts and deposits are opened in this initiative. Asopa, A., & Choudhary, K. R. (2025). Impact of Fintech-Digital Payments on financial inclusion in India. International Advance Journal of Engineering, Science and Management (IAJESM), 504-514.

(8).Sharanraj, S. M. (2025).
In This paper covers the evolution of fintech in India, focusing on its key growth drivers, challenges, and future trends. Despite its rapid expansion, fintech in India faces challenges such as cybersecurity risks, regulatory compliance, financial literacy gaps, and infrastructure limitations. Emerging trends such as AI-driven automation and blockchain technology are expected to drive innovation in the sector. The study highlights how fintech is shaping India's digital economy and underscores the need for robust security measures, effective regulatory frameworks, and public awareness to ensure its sustainable growth.
Sharanraj, S. M. (2025). The Evolution of Fintech in India: From Traditional Banking to Digital Transformation. Evolution, 2(12).

(9). **Vardhan, K.**
This paper explores the evolution, architecture, adoption patterns, socio-economic impact, and behavioral implications of UPI within India's broader digital payment ecosystem. It evaluates how UPI democratized financial access, reshaped consumer behavior, strengthened small businesses, and positioned India as a global leader in low cost fintech innovation. Through data-driven analysis and multidisciplinary perspectives, this study illustrates UPI's role as a pillar of India's digital economy and assesses its future trajectory. Vardhan, K. UPI and Digital Payments.

(10). **Whisker, N. E. (2026).**
In This study concludes that digital banking has become an important determinant of modern consumer financial behaviour. Its overall impact depends on the interaction between technology design, consumer financial literacy, regulatory safeguards, cybersecurity, and individual behavioural characteristics. Policies aimed at maximizing the benefits of digital banking should therefore combine technological innovation with consumer protection, digital financial education, responsible lending practices, data privacy, and inclusive digital infrastructure.Whitaker, N. E. (2026). Digital Banking and Its Impact on Consumer Financial Behaviour. Restitution Law Review, 34(2), 467-483.

SCOPE OF STYDY:

Based on the provided text, the Scope of Study encompasses the following boundaries and parameters:

- Geographical Scope: India.
- Temporal Scope (Time Period): 2017 to 2026.
- Core Subject/Topic Scope:
- The impact of the Unified Payments Interface (UPI) on the evolution of digital banking and financial inclusion.
- The transition from passive account creation to active digital usage via the public JAM (Jan-Dhan, Aadhaar, Mobile/RuPay) architecture and private fintech distribution.

3.Changes in Jan Dhan account metrics (operative rates, zero-balance account reductions, total deposits) alongside annual and monthly UPI transaction volumes/values.

4. Market share distribution among primary fintech channels (specifically PhonePe and Google Pay).

5.Strategic and operational implications for financial institutions (branch operation pivots, cybersecurity/infrastructure upgrades, and rural financial literacy).

- **Data Sources & Research Design**: A descriptive and analytical research design utilizing secondary data sourced from the Reserve Bank of India (RBI), National Payments Corporation of India (NPCI), and Pradhan Mantri Jan Dhan Yojana (PMJDY).

IMPORTANCE /SIGNIFICANCE OF THE STUDY:

- **Evaluates Real Financial Inclusion**: It demonstrates how India shifted from "passive" account creation (opening bank accounts) to "active" daily digital usage, providing empirical evidence of genuine financial inclusion.
- **Analyzes the Public-Private Synergy**: It highlights the critical partnership between public digital infrastructure (the JAM trinity—Jan-Dhan, Aadhaar, Mobile) and private fintech distribution (e.g., PhonePe, Google Pay) in driving mass consumer adoption.
- **Tracks Multi-Year Empirical Growth:** It provides a comprehensive multi-year (2017–2026) quantitative analysis using official secondary data (RBI, NPCI, PMJDY) to measure parameters like account operation rates, zero-balance reduction, deposit growth, and transaction surges.
- **Offers Strategic Insights for Banking Strategy**: It provides actionable recommendations for traditional financial institutions, emphasizing the need to pivot physical branches toward high-margin advisory services, strengthen cybersecurity/server infrastructure, and expand rural financial literacy.

RESEARCH METHODOLOGY:

- **Study Introduction:**

This study was conducted to find out the Impact of UPI transaction on the growth of Digital Banking in India to know about the growth and development Digital banking in India.

- **Study Design:**

The study design is used as analysis in nature of analytical. A study design is the determination and statement of general research approach or strategy is adopted for this particular project. It is the art of planning. The study design adopted for the study in analytical in nature, it is the specification of methods and procedures for acquiring the information needed. The research design, table, chart, & market share is used in the study is descriptive research.

- **Nature of data:**

This study uses the secondary data. Secondary data refers to the data which is not originally collected but rather obtained from the published and unpublished sources. And these data are already collected by the Reserve Bank of India, PMJDY, NPCI and this study shows the impact of UPI transaction on the growth of digital banking in India.

- **Study year:**

In order to examine the development and impact of digital focus on UPI Specifically, this study uses a descriptive and analytical methodology from 2017 to 2026.

HYPOTHESIS:

- **Null Hypothesis (H_{01}):** There is no significant relationship between the growth of internet users/mobile data usage and the growth of UPI transactions in India.
- **Alternative Hypothesis (H_{11}):** There is a significant positive relationship between the growth of internet users/mobile data usage and the growth of UPI transactions in India.
- **Null Hypothesis (H_{02}):** There is no significant difference in the growth rate and volume of UPI transactions during the pre-2020 period compared to the 2020–2022 period.
- **Alternative Hypothesis (H_{12}):** There is a significant increase in the growth rate and volume of UPI transactions during the 2020–2022 period compared to prior years.
- **Null Hypothesis (H_{03}):** The adoption of UPI does not significantly influence the broader expansion of digital payments and financial inclusion in India.
- **Alternative Hypothesis (H_{13}):** The adoption of UPI significantly drives the overall expansion of digital payments and digital banking penetration in India.
- **Null Hypothesis (H_{04})** :Off-site ATM deployment does not significantly influence the transaction value creation of UPI.
- **Alternative Hypothesis(H_{14})** : Off-site ATM deployment significantly contributes to the transaction value creation of UPI.
- **Null Hypothesis (H_{05}):** Digital banking will not become a widely accepted or the most demanded mode of transaction in the Indian banking sector in the future.
- **Alternative Hypothesis (H_{15}):** In the Indian banking sector, digital banking will emerge as a widely accepted and highly sought-after mode of transaction in the future.
- **Null Hypothesis (H_{06}):** The opportunities and risks arising from the development of digital banking in the Indian banking sector do not significantly affect the fundamental nature of banking.
- **Alternative Hypothesis (H_{16}):** The opportunities and risks arising from the growth of digital banking in the Indian banking sector significantly influence the fundamental nature of banking.
- **Null Hypothesis(H_{07})** : There is no significant relationship between the adoption of FinTech-driven digital payment systems (UPI, IMPS, AePS) and financial inclusion in India.
- **Alternative Hypothesis(H_{17})** : There is a significant positive relationship between the adoption of FinTech-driven digital payment systems (UPI, IMPS, AePS) and financial inclusion in India.
- **Null Hypothesis(H_{08}) :** The Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme does not significantly impact the Financial Inclusion Index or digital payment growth in India.
- **Alternative Hypothesis (H_{18}) :** PMJDY plays a significant role in enhancing financial inclusion through increased account openings and deposit mobilization.
- **Null Hypothesis (H_{09}):** Controlling fraud, and establishing network resilience and sustainable network effects, do not significantly impact the long-term (sustained) growth of UPI.
- **Alternative Hypothesis (H_{19}):** Controlling fraud, network resilience, and establishing a sustainable network effect significantly influence the long-term growth of UPI.
- **Null Hypothesis (H_{010})** : The adoption of UPI does not significantly alter consumer payment behaviors or small business operations.
- **Alternative Hypothesis (H_{110}):** High adoption rates of UPI significantly reshape consumer payment behavior and strengthen small business financial transactions.
- **Null Hypothesis(H_{011})**: Low-cost FinTech innovations like UPI do not have a measurable positive impact on India's overall digital economy growth.
- **Alternative Hypothesis (H_{111})**: Low-cost FinTech systems like UPI serve as a foundational pillar in driving India's digital economic growth and global innovation standing.

DATA ANALYSIS AND INTERPRETATION:

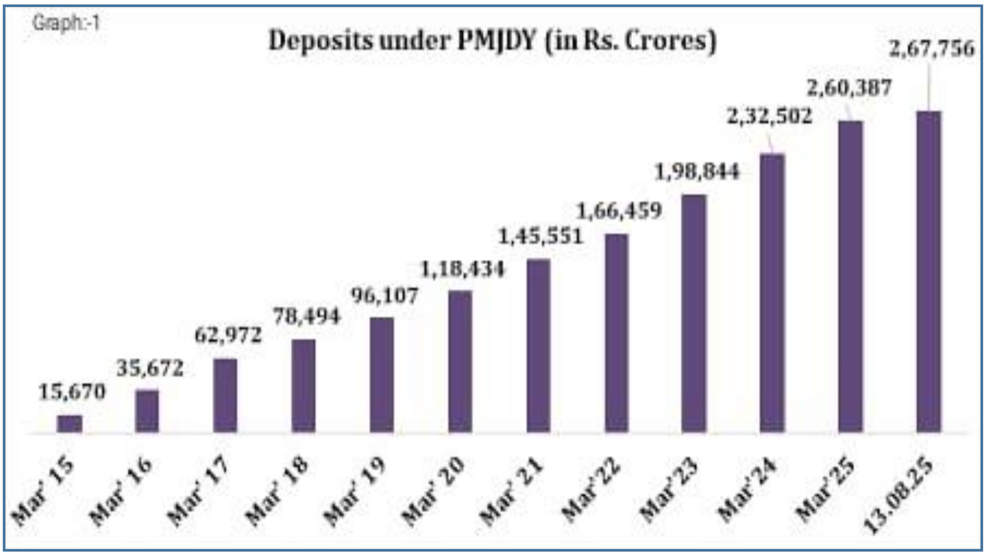
No.1

The interplay between Pradhan Mantri Jan Dhan Yojana (PMJDY) accounts and Unified Payments Interface (UPI) adoption represents one of the largest scale shifts in global financial inclusion—transforming basic bank accounts from passive deposit holders into active, daily transaction channels.

Table:1
Jan Dhan Accounts & Digital Integration Metrics (2017–2026).

Year (as of March)	Total PMJDY Accounts (in Crores)	Operative / Active Accounts (%)	Zero-Balance Accounts (%)	Total PMJDY Deposits (₹ Crores)	Average Balance / Account (₹)	RuPay Cards Issued (Crores)	Annual UPI Volume (Billions)
2017	28.17	75.3 %	24.2 %	62,972	≈ 2235	21.65	0.02
2018	31.44	82.1 %	15.0 %	78,494	≈ 2497	23.65	0.91
2019	35.27	84.8 %	14.3 %	96,107	≈ 2725	27.91	5.39
2020	38.00	86.3 %	13.2 %	118,434	≈ 3116	29.70	12.52
2021	42.20	85.2 %	14.0 %	145,551	≈ 3449	30.90	22.33
2022	45.06	88.2 %	8.2 %	166,459	≈ 3694	31.60	45.97
2023	48.65	89.1 %	8.0 %	198,844	≈ 4087	33.70	83.71
2024	51.95	90.1 %	7.4 %	232,502	≈ 4475	35.30	131.15
2025	54.80	91.5 %	6.8 %	260,387	≈ 4751	37.10	172.40
2026 (Est)	57.20	92.8 %	5.5 %	288,000	≈ 5035	39.00	215.00

(Data sourced from Department of Financial Services (DFS), Reserve Bank of India (RBI), and National Payments Corporation of India (NPCI) official releases.)



DATA INTERPRETATION:

1. **Account Expansion vs. Operationalization.**
   - **Total Account Growth**: PMJDY accounts expanded steadily from 28.17 crore (2017) to 57.20 crore (2026 Est.), more than doubling over the decade.
   - **Reduction in Inactive Accounts:** Operative/Active accounts rose consistently from 75.3% in 2017 to 92.8% in 2026, demonstrating that account opening was followed by sustained usage rather than immediate dormancy.

2. **Structural Decline in Zero-Balance Accounts.**
   - **From Provision to Participation:** Zero-balance accounts saw a steep drop from 24.2% in 2017 down to 5.5% in 2026.
   - **Mechanics:** This transition signifies the effective integration of Direct Benefit Transfer (DBT) payments (e.g., PM-KISAN, MGNREGA) and growing voluntary household savings deposited directly into basic bank accounts.

3. **Deepening Financial Density (Deposits & Average Balance).**
   - **Total Deposits Growth**: Aggregate savings in PMJDY accounts surged from ₹62,972 crore (2017) to ₹2,88,000 crore (2026 Est.), reflecting a 4.5x growth.
   - **Per-Account Capital Accumulation:** Average balance per account increased by 125%—rising from ~₹2,235 in 2017 to ~₹5,035 in 2026. This underscores increased liquidity retention at the bottom of the economic pyramid.

4. **RuPay Infrastructure & UPI Volume Catalyst.**
   - **RuPay Issuance**: RuPay card adoption nearly doubled from 21.65 crore (2017) to 39.00 crore (2026 Est.), providing the foundational debit layer for rural account holders.
   - **The UPI Explosion:** Annual UPI transaction volume grew exponentially from 0.02 billion (2017) to 215.00 billion (2026 Est.). The rapid acceleration after 2020 highlights how low-friction digital infrastructure converted basic savings accounts into primary transaction channels for daily payments.

No.-2

The Numbers Behind the UPI Revolution," illustrating the growth of UPI transaction volume for the month of July across different years (in ₹ lakh Cr).

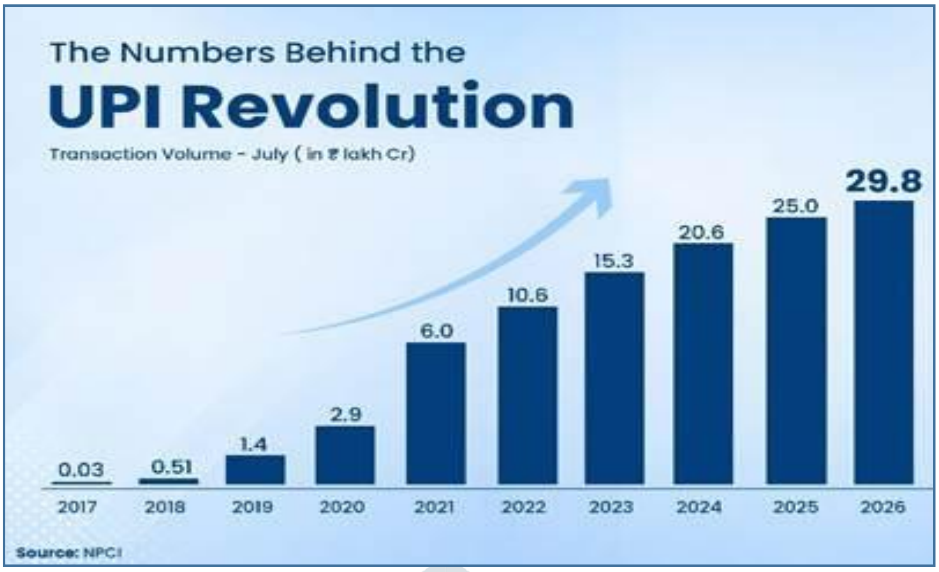
Table:-2

UPI Transaction Volume Growth (July Data: 2017–2026)

Year (July)	Transaction Volume (in ₹ Lakh Crore)
2017	0.03
2018	0.51
2019	1.4
2020	2.9
2021	6.0
2022	10.6
2023	15.3
2024	20.6
2025	25.0
2026	29.8

Source: National Payments Corporation of India (NPCI).

Graph 2



DATA INTERPRETATION:

1. **Consistent Upward Growth**: UPI transaction volume for July shows a continuous, uninterrupted rise year-over-year from 2017 to 2026.
2. **Massive Scale Expansion**: The transaction volume surged from ₹0.03 lakh Cr in July 2017 to ₹29.8 lakh Cr in July 2026—representing a multi-fold exponential growth over nine years.
3. **Rapid Post-2020 Surge**: Growth accelerated significantly after 2020 (rising from ₹2.9 lakh Cr in 2020 to ₹6.0 lakh Cr in 2021, and continuing to increase by roughly ₹4–5 lakh Cr every year thereafter).
4. **Source:** Data provided by the NPCI (National Payments Corporation of India).

No.-3

India UPI Transactions Growth (Jan–Jul 2026):

Month	**Total UPI Transactions (in Billion)**
Jan 2026	21.70
Feb 2026	20.39
Mar 2026	22.64
Apr 2026	22.35
May 2026	23.20
Jun 2026	22.72

Month	Total UPI Transactions (in Billion)
Jul 2026	23.66

Source: National Payments Corporation of India (NPCI).

Graph 3

DATA INTERPRETATION:

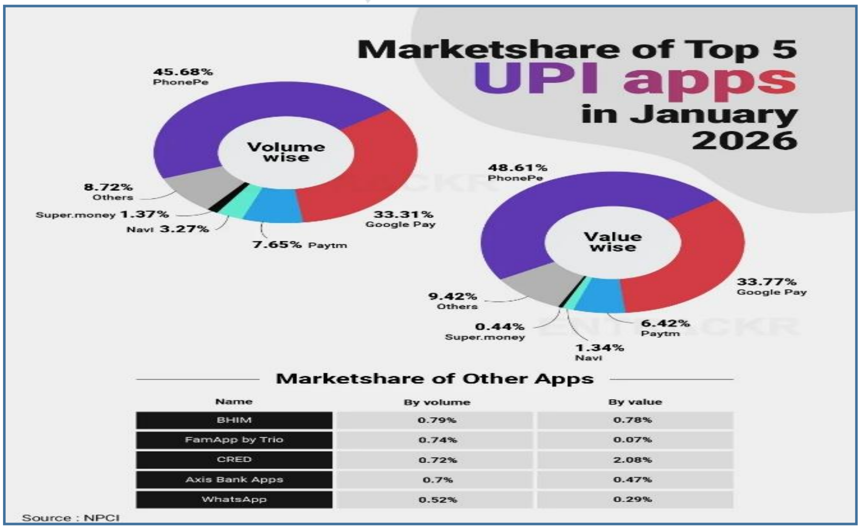
1. **Monthly Transaction Volume (in Billions).**
   - January 2026: 21.70 Billion.
   - February 2026: 20.39 Billion (Lowest volume in the period).
   - March 2026: 22.64 Billion.
   - April 2026: 22.35 Billion.
   - May 2026: 23.20 Billion.
   - June 2026: 22.72 Billion.
   - July 2026: 23.66 Billion (New Record / Highest volume).

2. **Key Summary & July 2026 Highlights.**
   - Peak Volume: 23.66 Billion transactions reached in July 2026, marking the highest monthly volume ever recorded.
   - Total Transaction Value (July 2026): ₹29.9 Lakh Crore.
   - Source Attribution: National Payments Corporation of India (NPCI) as of July 31, 2026.

No.- 4

- **MARKETSHARE OF TOP 5 UPI APPS GROWTH RATE IN JANUARY 2026 TO JULY 2026:**

➢ **MARKETSHARE OF TOP 5 UPI APPS IN JANUARY 2026.**



Source: National Payments Corporation of India (NPCI).

DATA INTERPRETATION:

1. Market Duopoly (Top 2 Dominate).

- PhonePe leads the market, holding 45.68% of transaction volume and 48.61% of transaction value.
- Google Pay ranks second, capturing 33.31% of volume and 33.77% of value.
- Together, PhonePe and Google Pay control nearly 79% of total volume and 82.38% of total transaction value.

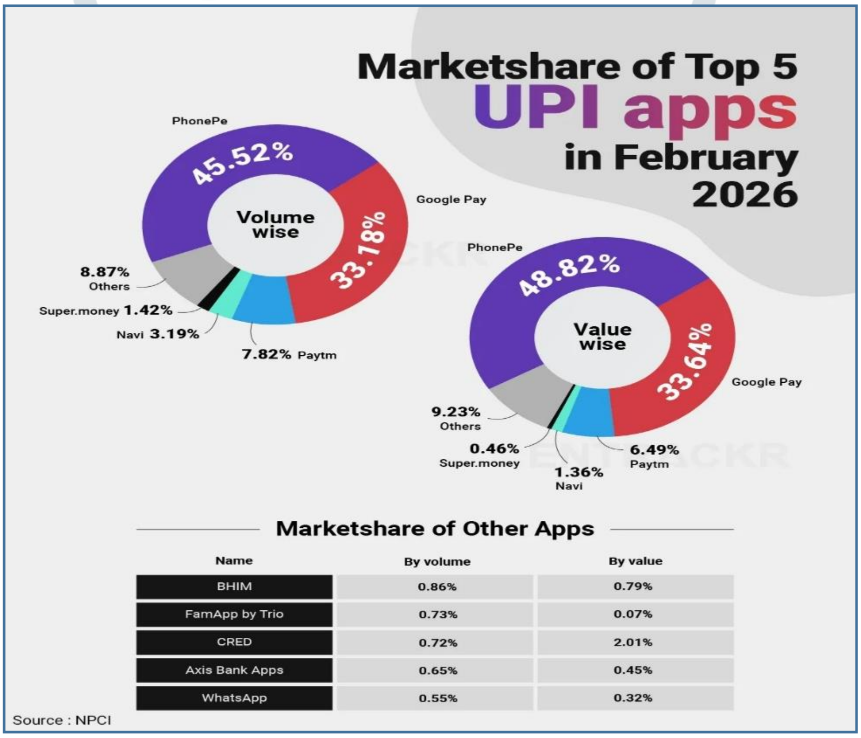
2. The Rest of the Top 5.

- Paytm holds third place with 7.65% volume and 6.42% value.
- Navi (3.27% volume) and Super.money (1.37% volume) capture smaller shares.
- Others combine for 8.72% volume and 9.42% value.

3. Transaction Habits (Volume vs. Value).

- CRED stands out with low volume (0.72%) but a higher value share (2.08%), reflecting larger average payment sizes (e.g., credit card bills).
- FamApp by Trio and Super.money show high volume relative to low value (0.07% and 0.44% respectively), representing small, high-frequency transactions.

➢ **MARKETSHARE OF TOP 5 UPI APPS IN FEBRUARY 2026.**



Source: National Payments Corporation of India (NPCI).

DATA INTERPRETATION:

1. Market Duopoly (Top 2 Lead).

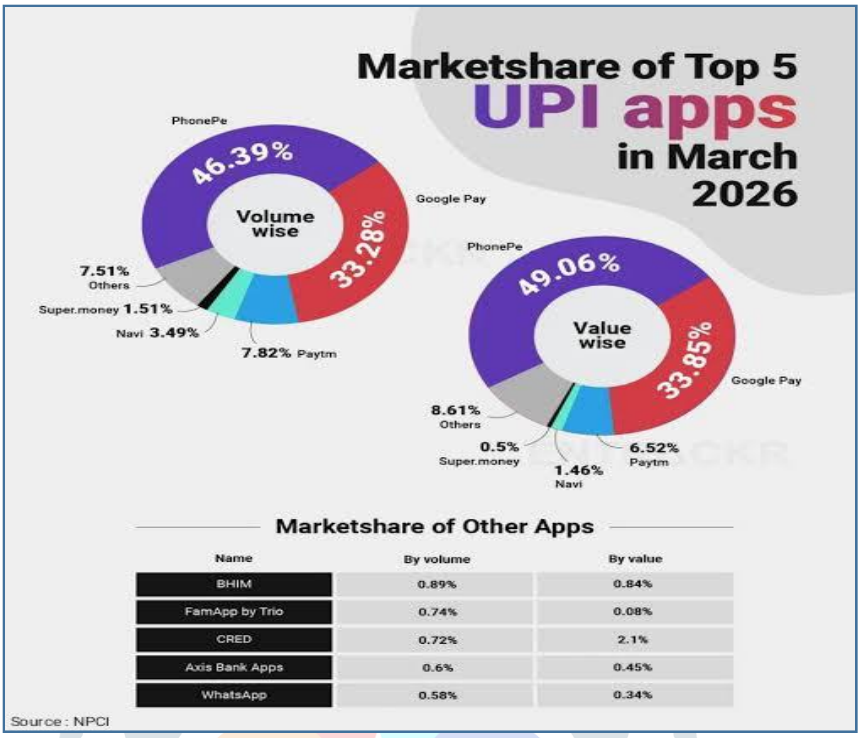
- PhonePe dominates the market, commanding 45.52% of volume and 48.82% of value.
- Google Pay ranks second, holding 33.18% of volume and 33.64% of value.
- Together, PhonePe and Google Pay control 78.70% of total volume and 82.46% of total transaction value.

2. **Next Top Players.**

- Paytm holds the third spot with 7.82% volume and 6.49% value.
- Navi (3.19% volume) and Super.money (1.42% volume) form the rest of the Top 5.
- Others combine for 8.87% volume and 9.23% value.

3. **Key Spending Patterns (Volume vs. Value).**
    - CRED registers low volume (0.72%) but a significantly higher value share (2.01%), pointing to larger average ticket sizes (e.g., credit card bill payments).
    - FamApp by Trio and Super.money record higher transaction volumes relative to value (0.07% and 0.46% respectively), indicating high-frequency, small micro-transactions.

➢ **MARKETSHARE OF TOP 5 UPI APPS IN MARCH 2026.**



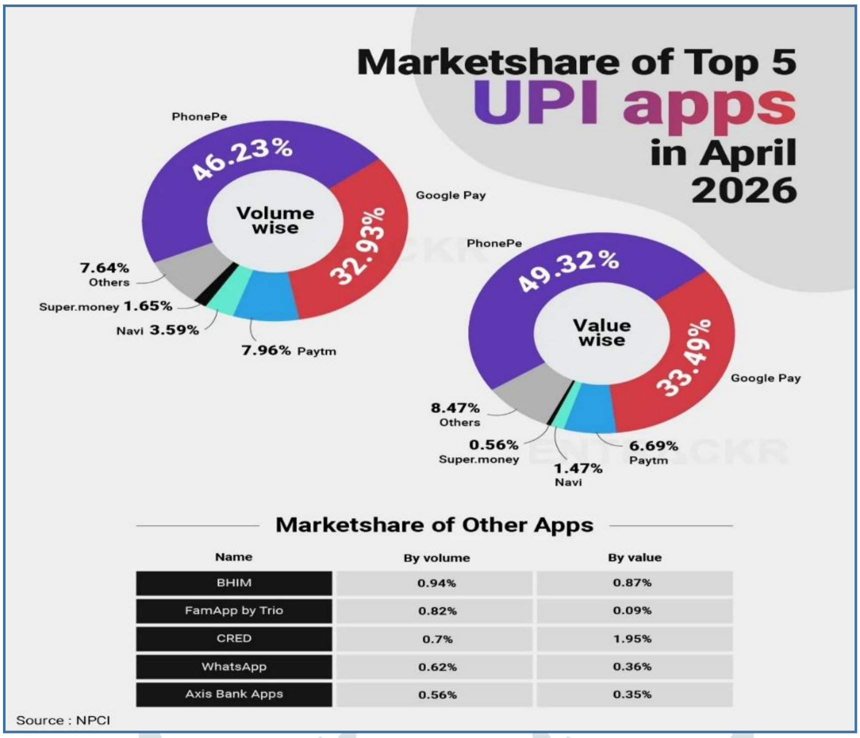
Source: National Payments Corporation of India (NPCI).

DATA INTERPRETATION:

1. **Market Duopoly (Top 2 Lead).**
    - PhonePe expanded its overall leadership, capturing 46.39% of volume and 49.06% of total transaction value.
    - Google Pay maintained a strong second position, accounting for 33.28% of volume and 33.85% of value.
    - Together, PhonePe and Google Pay control 79.67% of transaction volume and 82.91% of transaction value.
2. **Remaining Top Players.**
    - Paytm retained third place with 7.82% volume and 6.52% value.
    - Navi (3.49% volume) and Super.money (1.51% volume) round out the Top 5.
    - Others account for 7.51% volume and 8.61% value.

3. **Spending Patterns & Micro-Trends.**
    - CRED continues to drive high average ticket sizes, holding only 0.72% volume share but 2.10% value share.
    - FamApp by Trio and Super.money show high transaction frequency relative to low value (0.08% and 0.50% value respectively), indicating small micro-transactions.

MARKETSHARE OF TOP 5 UPI APPS IN APRIL 2026.



Name	By volume	By value
BHIM	0.94%	0.87%
FamApp by Trio	0.82%	0.09%
CRED	0.7%	1.95%
WhatsApp	0.62%	0.36%
Axis Bank Apps	0.56%	0.35%

Source: National Payments Corporation of India (NPCI).

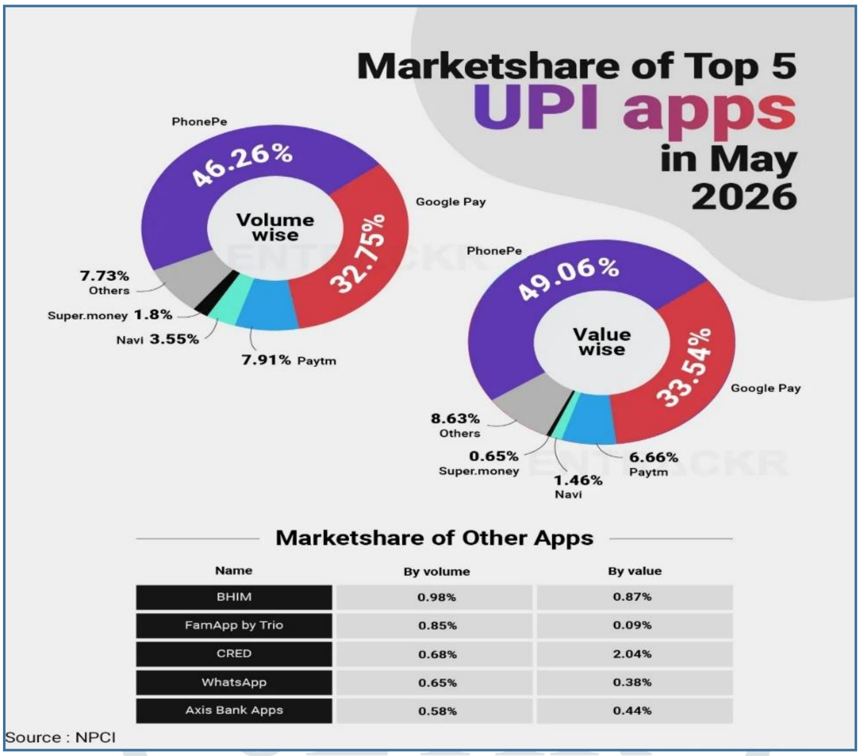
DATA INTERPRETATION:

1. **Market Duopoly (Top 2 Lead).**
   - PhonePe maintains its overall market lead, holding 46.23% of volume and hitting a peak value share of 49.32%.
   - Google Pay remains in second place, capturing 32.93% of transaction volume and 33.49% of total value.
   - Together, PhonePe and Google Pay control 79.16% of total volume and 82.81% of total transaction value.

2. **Next Top Players.**
   - Paytm holds the third spot, slightly increasing its share to 7.96% volume and 6.69% value.
   - Navi (3.59% volume) and Super.money (1.65% volume) continue to hold the remaining top positions.
   - Others account for 7.64% volume and 8.47% value.

3. **Spending Patterns & Micro-Trends.**
   - CRED continues to drive high average ticket sizes, commanding 1.95% of value despite only taking 0.70% of total volume.
   - BHIM shows steady growth, reaching 0.94% volume and 0.87% value share.
   - FamApp by Trio and Super.money keep recording high volume relative to value (0.09% and 0.56% value share respectively), reflecting small micro-transactions.

MARKETSHARE OF TOP 5 UPI APPS IN MAY 2026.



Source: National Payments Corporation of India (NPCI).

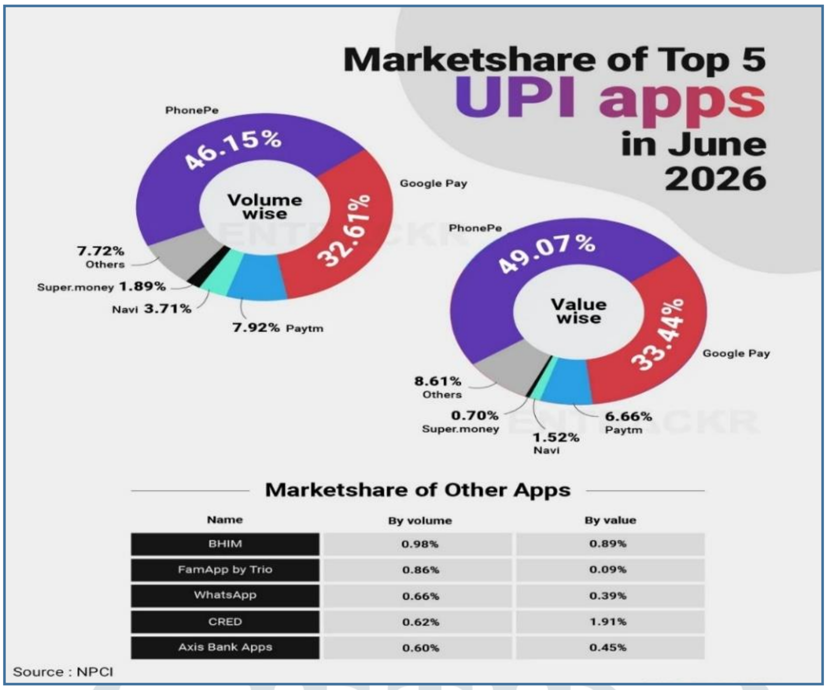
DATA INTERPRETATION:

1. **Core Duopoly Dominance.**
   - PhonePe leads the market with 46.26% volume share and 49.06% value share.
   - Google Pay holds second place with 32.75% volume share and 33.54% value share.
   - Together, PhonePe and Google Pay control 79.01% of transaction volume and 82.60% of total value.

2. **Middle Tier & Growth App Standings**
   - Paytm holds the third position with 7.91% volume share and 6.66% value share.
   - Navi captures 3.55% volume share and 1.46% value share.
   - Super.money holds 1.80% volume share and 0.65% value share.
   - Others account for 7.73% volume and 8.63% value share.

3. **Spending Patterns & Micro-Trends**
   - CRED continues its trend as a high-value outlier, commanding 2.04% of value share despite taking only 0.68% of transaction volume due to larger bill payment sizes.
   - BHIM recorded 0.98% volume share and 0.87% value share.
   - FamApp by Trio and Super.money reflect high-frequency micro-transactions with low value relative to volume (0.09% and 0.65% value shares respectively).

MARKETSHARE OF TOP 5 UPI APPS IN JUNE 2026.



Name	By volume	By value
BHIM	0.98%	0.89%
FamApp by Trio	0.86%	0.09%
WhatsApp	0.66%	0.39%
CRED	0.62%	1.91%
Axis Bank Apps	0.60%	0.45%

Source: National Payments Corporation of India (NPCI).

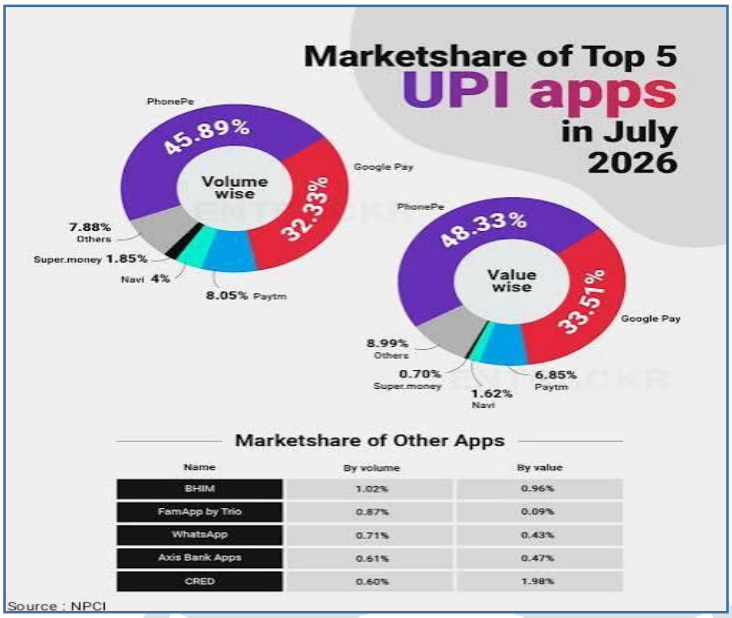
DATA INTERPRETATION:

1. **Core Duopoly Dominance.**
   - PhonePe leads the market with 46.15% volume share and 49.07% value share.
   - Google Pay holds second place with 32.61% volume share and 33.44% value share.
   - Together, PhonePe and Google Pay control 78.76% of transaction volume and 82.51% of total transaction value.

2. **Middle Tier & Growth App Standings.**
   - Paytm holds third place with 7.92% volume share and 6.66% value share.
   - Navi captures 3.71% volume share and 1.52% value share.
   - Super.money reaches 1.89% volume share and 0.70% value share.
   - Others account for 7.72% volume and 8.61% value share.

3. **Spending Patterns & Micro-Trends.**
   - CRED maintains its position as a high-value outlier, commanding 1.91% value share despite only taking 0.62% volume share (due to larger bill payment sizes).
   - BHIM recorded 0.98% volume share and 0.89% value share.
   - WhatsApp reached 0.66% volume share and 0.39% value share.
   - FamApp by Trio and Super.money reflect high-frequency micro-transactions with low value relative to volume (0.09% and 0.70% value share respectively).

MARKETSHARE OF TOP 5 UPI APPS IN JULY 2026.



Source: National Payments Corporation of India (NPCI).

DATA INTERPRETATION:

1. **Core Duopoly Dominance.**
   - PhonePe leads the market with 45.89% volume share and 48.33% value share.
   - Google Pay holds second place with 32.33% volume share and 33.51% value share.
   - Together, PhonePe and Google Pay control 78.22% of transaction volume and 81.84% of total transaction value.

2. **Middle Tier & Growth App Standings.**
   - Paytm holds third place, rising to 8.05% volume share and 6.85% value share.
   - Navi reaches 4.00% volume share and 1.62% value share.
   - Super.money holds 1.85% volume share and 0.70% value share.
   - Others account for 7.88% volume and 8.99% value share.

3. **Spending Patterns & Micro-Trends.**
   - CRED remains a distinct high-value outlier, processing 1.98% of total value despite commanding only 0.60% of volume due to larger bill payment sizes.
   - BHIM recorded 1.02% volume share and 0.96% value share, crossing the 1% volume threshold.
   - FamApp by Trio and Super.money reflect high-frequency micro-transactions with low value relative to volume (0.09% and 0.70% value share respectively).

FINDING:

Utilizing a descriptive and analytical research design based on secondary data, this study synthesizes longitudinal transaction datasets, statistical bulletins, and regulatory reports published by key financial institutions, including the Reserve Bank of India (RBI), the National Payments Corporation of India (NPCI), and the Pradhan Mantri Jan Dhan Yojana (PMJDY) framework.

While digital payments initially catered to educated urban populations, the tri-fold synergy of Jan-Dhan Accounts (PMJDY), RuPay Cards, and UPI between 2017 and 2026 drove massive, nation-wide financial inclusion across India.

- **Jan-Dhan & RuPay Financial Integration (2017 vs. 2026):**
- Account Activation: Operative accounts increased from 75.3% to 92.8%.
- Zero-Balance Accounts: Dropped from 24.2% down to 5.5%, spurred by Direct Benefit Transfers (PM-KISAN, MGNREGA) and individual savings.
- Deposits & Cards: Average deposit per account expanded by 125% (from ₹2,235 to ₹5,035), taking total deposits to ₹2.88 lakh crore (a 4.5x growth). Active RuPay debit cards reached 39 crore.
- RuPay cards: The number of issued cards increased from 21.65 crore to 39 crore.

- **Explosive Expansion of UPI:**
- Annual Volume: Scaled from 0.02 billion transactions in 2017 to a projected 215 billion in 2026.
- Record Peak (July 2026): Clocked an all-time high monthly volume of 23.66 billion (2,366 crore) transactions valued at ₹29.9 lakh crore (up from ₹0.03 lakh crore in July 2017).

- **Market Share Concentration:**
- PhonePe & Google Pay maintain a duopoly, together holding >78% of volume and >82% of total transaction value.
- PhonePe (1st): ~46% volume | ~49% value.
- Google Pay (2nd): ~33% volume | ~34% value.
- Paytm (3rd): ~7.6%–7.9% volume (followed by emerging players like Navi, Super.money, and BHIM).

Key Takeaway:
Bank accounts that once lay dormant are now active daily channels for transactions. Government infrastructure (PMJDY and RuPay) combined with private app adoption (UPI) converted passive bank accounts into the primary engine of India's digital economy.

SUGGESTIONS:-

The following are the suggestions from the study on the number of users in India, for banks and policymakers based on the research finding:

- **Smart Branch Operations**: The burden of cash transactions and routine inquiries at bank branches has now decreased. Therefore, banks should focus on deploying branch staff toward higher-revenue-generating activities such as financial advisory, loans, insurance, and wealth management.
- **Rethinking Debit Card Strategy**: The use of debit cards for small, everyday payments has declined significantly. Banks should now focus on premium cards, cashback offers, and international travel benefits to encourage customers to use debit cards for larger transactions.
- **Investment in UPI servers and cybersecurity**: With 85% of transactions taking place via UPI, the digital load on banking systems is immense. Banks need to further strengthen their IT infrastructure, server capacity, and fraud detection systems to prevent transaction failures and safeguard against cyber fraud.
- **Digital Financial Literacy:** With the widespread expansion of digital transactions, it is essential to raise awareness among users in rural and semi-urban areas about security protocols (such as not sharing UPI PINs with anyone).

CONCLUSION:
The empirical findings demonstrate that the Unified Payments Interface (UPI) has been the cornerstone of a structural shift in India's banking and digital financial architecture. The integration of the JAM tri-fold (Jan-Dhan, Aadhaar, RuPay) with private fintech distribution channels transformed previously dormant accounts into daily transaction hubs.

The paper highlights four key conclusions:

1. **Activation over Monetization:** The steep drop in zero-balance accounts (from 24.2% to 5.5%) and the 125% surge in average deposits prove that financial inclusion in India has transitioned from passive account creation to active digital participation. Direct Benefit Transfers (DBT) and zero-cost micro-transactions turned marginalized bank accounts into active financial assets.

2. **Shift in Retail Banking Behavior:** Scaling from 0.02 billion transactions in 2017 to over 215 billion in 2026 confirms that UPI successfully replaced cash for low-ticket retail transactions. High transaction volumes accompanied by relatively smaller average ticket sizes demonstrate that UPI acts primarily as a daily retail payment layer rather than just a high-value transfer medium.

3. **Synergy of Public Infrastructure & Private Distribution:** The public rail provided by NPCI and RBI created the base, but market delivery relied heavily on private app adoption. The sustained duopoly of PhonePe and Google Pay (holding >78% volume and >82% value) highlights that user interface, consumer trust, and app-level convenience dictate final adoption pathways in digital banking.

4. **Macroeconomic Implications:** Bank reliance on traditional brick-and-mortar branches for routine transactions has diminished, giving way to dynamic, real-time digital liquidity. This operational pivot has expanded formal credit footprints and laid the groundwork for further fintech innovations, including UPI Credit Line, soundbox merchant expansion, and cross-border remittances.

Summary:

The growth of UPI did not merely digitize existing payments—it fundamentally re-engineered retail banking in India. By bridging the gap between rural bank account access and daily financial utility, UPI served as the primary catalyst that converted India's cash-reliant populace into an active digital economy.

REFERENCE:

- National Payments Corporation of India (NPCI) - Enabling digital payments in India https://www.npci.org.in/circulars/upi
- Unified payments Interface (UPI) Product Statistics :NPCI https://www.npci.org.in/product/upi/product-statistics
- NPCI - Meeting Calendar for Year 2026 https://www.npci.org.in/meeting-calendar
- UPI completes 10 years of digital payments, sees 13,000-fold surge in transaction volume, 4,000-fold rise in value : The Hindu https://www.thehindu.com/business/Economy/upi-completes-10-years-clocks-nearly-13000-fold-rise-in-transaction-volume/article71384088.ece
- India built the world's biggest digital payments miracle. Now comes the bill:BBC https://www.bbc.com/news/articles/c8xnwqe00v1o
- UPI: Revolutionizing Digital Payments in India:Government of India https://www.pib.gov.in/PressReleasePage.aspx?PRID=2079544&reg=48&lang=2
- UPI: India's Digital Revolution Goes Global:PIB https://www.pib.gov.in/FeaturesDeatils.aspx?id=155224&NoteId=155224&ModuleId=2&reg=48&lang=2
- UPI: Transforming India's Payment Landscape: PIB https://www.pib.gov.in/FactsheetDetails.aspx?id=150962&NoteId=150962&ModuleId=16&reg=48&lang=1
- PMJDY: https://pmjdy.gov.in/hi-home
- Pradhan Mantri Jan-Dhan Yojana | Department of Financial Services | Ministry of Finance https://pmjdy.gov.in/scheme
- financialinclusion https://www.rbi.org.in/commonman/Upload/English/Content/PDFs/English_16042021.pdf
- Ministry of Finance https://www.pib.gov.in/PressReleasePage.aspx?PRID=1854909
- Pradhan Mantri Jan Dhan Yojana - Wikipedia https://en.wikipedia.org/wiki/Pradhan_Mantri_Jan_Dhan_Yojana