



STUDY OF THE GROWTH TRAJECTORY OF SELECT DIGITAL PAYMENT PRODUCTS FOR THE MASS MARKET (PAST 5 YEARS)

Akshita Mishra¹, Dr. Ram Asrey²

¹Research Scholar, Department of Commerce, University of Lucknow

²Associate Professor, Department of Commerce, Government Degree College, Kuchlai, Sitapur, Uttar Pradesh

Corresponding Author Email: makshita126@gmail.com

Received: 05 April 2026 | Accepted: 18 April 2026 | Published: 29 April 2026

Abstract

India's digital payments space has changed dramatically over the past decade, but it is the last five years that have truly redefined how ordinary people transact. The COVID-19 pandemic played an unexpected but undeniable role in pushing even reluctant users toward contactless and cashless modes of payment. Millions of first-time users many from smaller towns and villages suddenly found themselves navigating mobile apps and biometric terminals, often out of necessity rather than choice. This paper attempts to trace the growth journey of four specific digital payment products UPI (Unified Payments Interface), BHIM Aadhaar Pay (BAP), AePS (Aadhaar-enabled Payment System), and RuPay Debit Cards and understand how each has found its footing in the mass market. The study also looks at the broader ecosystem: government push, regulatory support, fintech activity, and public-private collaboration that together created the conditions for this shift. Through transaction data, usage trends, and product-level observations, this paper aims to present a ground-level picture of how digital payments have moved from being an urban convenience to a mass-market reality and what that means for the future of financial inclusion in India.

Keywords: Digital Payments, Cashless Transactions, UPI, AePS, BAP, RuPay Debit Card, Financial Inclusion.

1. Introduction

India's journey toward digital payments did not happen overnight, nor was it the result of any single policy or product. It has been a gradual but accelerating process, shaped by a combination of infrastructure development, regulatory intervention, and changing consumer habits. The 2016 demonetisation was arguably the most visible turning point. While it created short-term disruption, it also forced a large section of the population to look beyond cash for their daily transactions. Around the same time, NPCI's launch of UPI quietly set the stage for what would become one of the world's most used digital payment systems. In the years that followed, the penetration of affordable smartphones, cheaper data, and better internet connectivity in tier-2 and tier-3 cities helped widen the base. Government programs like Jan Dhan Yojana brought previously unbanked citizens into the formal financial fold, making them ready participants in the digital economy. Financial literacy drives further helped break down resistance to new technology. For merchants and small business owners, incentives like cashback offers, zero transaction fees, and QR-based setups reduced the barriers to adoption. Digital payments gradually stopped being just an alternative to cash they became the default for many users across income groups.

This study examines four products AePS, BAP, UPI, and RuPay Debit Cards that have together shaped the mass-market digital payments story in India over the past five financial years.

2. Objectives of the Study:

1. To understand what digital payments mean in the Indian context.
2. To explore the design and purpose of the four selected digital payment products.
3. To study and interpret the growth trends of these products over the past five financial years.

3. Research Methodology:

This is a descriptive study primarily relying on quantitative data. All data used is secondary in nature, sourced from official publications of the National Payments Corporation of India (NPCI) and the Reserve Bank of India (RBI), government reports from MeitY, and relevant articles from financial publications. The study covers the period from FY 2019-20 to FY 2023-24.

Meaning of Digital Payments:

At its simplest, a digital payment is any financial transaction that takes place without physical cash changing hands. In India, this covers a wide spectrum from UPI transfers and mobile wallets to Aadhaar-based biometric payments and card swipes at merchant terminals. What makes the Indian context particularly interesting is that digital payments here are not just a convenience for tech-savvy urban users. For a significant portion of the population, especially in rural and semi-urban areas, platforms like AePS have become the primary means of accessing banking services at all. In this sense, digital payments carry a social weight that goes beyond mere transaction efficiency.

The rapid spread of smartphones, low-cost internet access, and a policy environment actively encouraging cashless transactions have collectively pushed digital payments into everyday life from grocery purchases and utility bills to government benefit transfers and inter-family remittances.

The Four Selected Digital Payment Products

India's payment ecosystem is diverse, but certain products have had an outsized influence on mass-market adoption. Below is a brief overview of the four products studied here.

AePS ((Aadhaar-enabled Payment System):

AePS is a bank-led model that allows users to carry out basic banking transactions withdrawals, balance checks, and fund transfers using just their Aadhaar number and fingerprint. It works through micro-ATMs operated by banking correspondents, making it particularly relevant in areas where bank branches are few and far between. The genius of AePS lies in its simplicity. It does not require a smartphone, a debit card, or even literacy. A fingerprint is sufficient. This has made it an effective tool for delivering Direct Benefit Transfers (DBTs) to the intended beneficiaries, cutting out intermediaries and reducing leakage.

BAP (Bhim Aadhaar Pay):

BHIM Aadhaar Pay takes the AePS concept a step further by enabling merchant payments through Aadhaar-based biometric authentication. A merchant with a biometric device and a smartphone can accept payments directly from a customer's bank account no card, no phone, no PIN required from the customer's end. This model is well-suited to small

shops, kirana stores, and rural vendors who may not have the resources or technical know-how to set up conventional POS systems. It also brings accountability to small-ticket transactions that might otherwise remain cash-based.

UPI (Unified Payment Interface):

Launched by NPCI, UPI has grown into one of India’s most significant financial infrastructure achievements. It allows users to link multiple bank accounts to a single app and transfer money in real-time using a Virtual Payment Address (VPA), a phone number, or a QR code. Its appeal cuts across demographics college students splitting bills, homemakers paying vendors, small businesses collecting payments, and large retailers processing bulk transactions all use UPI daily. The round-the-clock availability, zero charges for most transfers, and the interoperability across hundreds of banks have made it the go-to payment method for a very large and growing user base.

Card-based Payments:

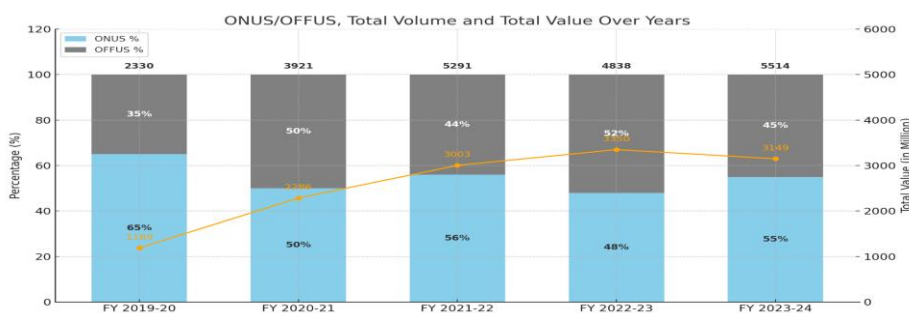
RuPay is India’s own card network, developed by NPCI as a domestic alternative to international schemes. RuPay Debit Cards are issued widely by public and private banks, and their linkage with the Pradhan Mantri Jan Dhan Yojana (PMJDY) has brought card-based payments within reach of millions of previously unbanked citizens. While UPI has overshadowed cards in recent years for small-value transactions, RuPay continues to hold relevance especially for POS transactions, ATM withdrawals, and users who are more comfortable with a physical card than a mobile app.

4. Data Interpretation

The following section examines transaction volume and value trends across the four products from FY 2019-20 to FY 2023-24.

1. AePS – Transaction Trends

Graphical Representation:



Tabular Representation:

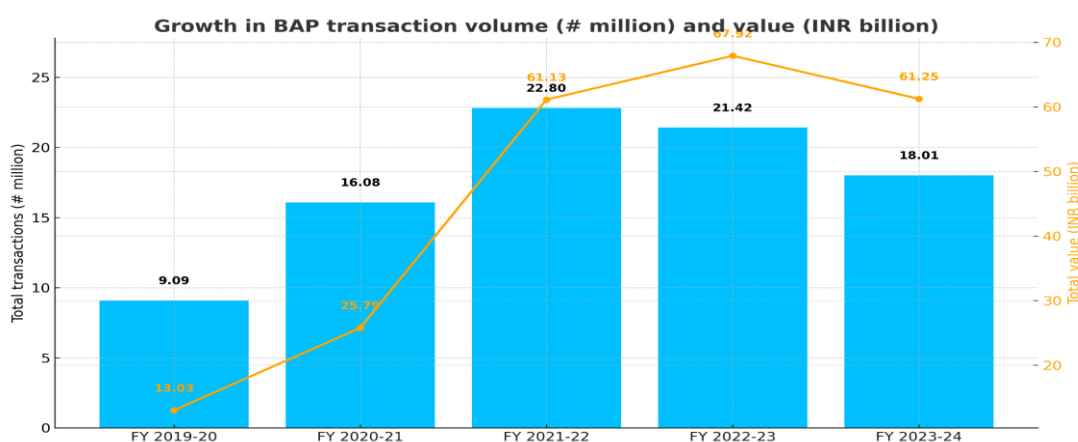
Year	ONUS %	OFFUS %	Total Volume (In million)	Total Value (In Billion)
FY 2019-20	65%	35%	2330	1189
FY 2020-21	50%	50%	3921	2286
FY 2021-22	56%	44%	5291	3003
FY 2022-23	48%	52%	4838	3350
FY 2023-24	55%	45%	5514	3149

Observations:

AePS has shown strong overall growth, with transaction volumes rising from 2,330 million in FY 2019-20 to 5,514 million in FY 2023-24 a 137% increase. The sharpest jump came between FY 2020-21 and FY 2021-22, when volume leapt from 3,921M to 5,291M. This spike likely reflects the post-pandemic surge in rural banking activity, as people returned to or discovered biometric banking services during and after the lockdowns. One notable dip occurred in FY 2022-23, when volumes fell to 4,838M despite value continuing to rise to ₹3,350 billion the highest across the five years. This suggests that while the number of transactions plateaued temporarily, the average ticket size was increasing, pointing to greater usage for higher-value withdrawals. The ONUS-OFFUS balance has remained broadly stable, though the gradual rise in OFFUS share (from 35% to 52% at peak) indicates growing interoperability usage people transacting outside their home bank's network.

2. BAP – Transaction Trends

Graphical Representation:



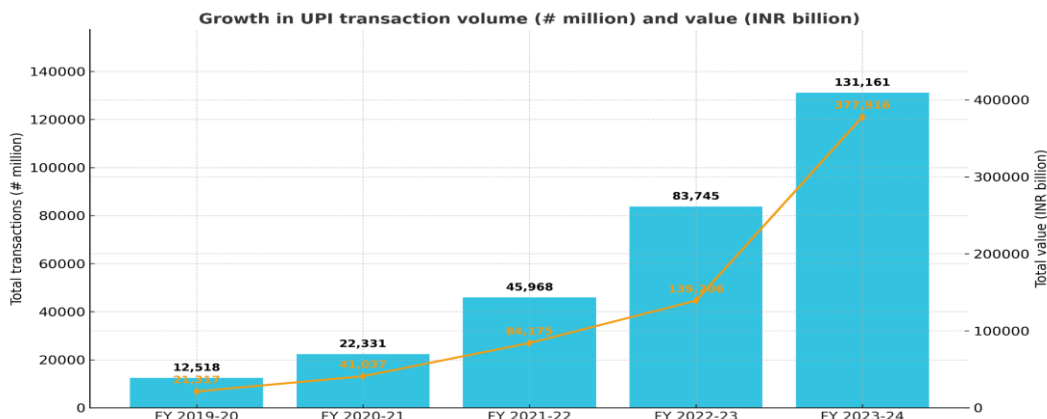
Tabular Representation:

Year	Total Transactions Value (In Billion)	Total Transactions Volume (In Million)
FY 2019-20	13.03	9.09
FY 2020-21	25.79	16.08
FY 2021-22	61.13	22.8
FY 2022-23	67.92	21.42
FY 2023-24	61.25	18.01

BAP's growth story is one of a rapid rise followed by a gradual cooling off. From a modest base of 9.09 million transactions in FY 2019-20, it climbed sharply to 22.80 million by FY 2021-22 a 150% increase in three years. Transaction values followed a similar arc, peaking at ₹67.92 billion in FY 2022-23. Since then, both volume and value have declined modestly. The dip in FY 2023-24 (18.01M transactions, ₹61.25B in value) is notable. One plausible explanation is that UPI's expanding reach has drawn some users including small merchants away from BAP. As UPI-based QR payments became simpler and more widespread, some use cases that BAP previously served have been absorbed by UPI. That said, BAP still serves a genuinely distinct user segment: customers who lack smartphones and cannot use UPI at all. Its relevance in deeply rural contexts remains real, even if growth has stabilised.

3. UPI – Transaction Trends

Graphical Representation:



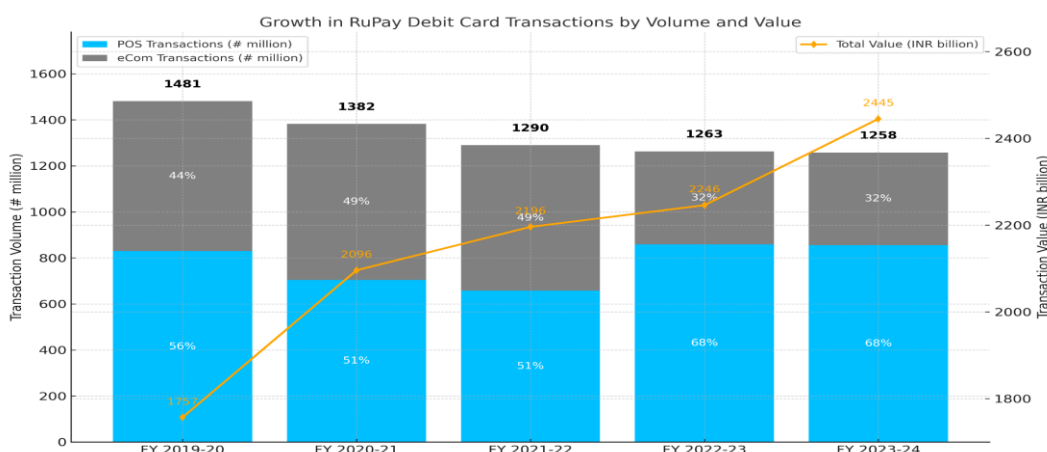
Tabular Representation:

Year	Total Transactions Value (In Billion)	Total Transactions Volume (In Million)
FY 2019-20	21317	12518
FY 2020-21	41037	22331
FY 2021-22	84175	45968
FY 2022-23	139206	83745
FY 2023-24	377916	131161

The UPI numbers are, frankly, staggering. Transaction volumes grew from 12,518 million in FY 2019-20 to 1,31,161 million in FY 2023-24 a tenfold increase in five years. The value trajectory is even more dramatic, jumping from ₹21,317 billion to ₹3,77,916 billion over the same period. What is particularly striking is the acceleration in the last two years. The jump from ₹84,175B in FY 2021-22 to ₹1,39,206B in FY 2022-23, and then to ₹3,77,916B in FY 2023-24, suggests that UPI is not just attracting more users but also being used for larger and more frequent transactions. This points to a maturation of usage patterns people are no longer just using UPI for small peer-to-peer transfers but also for significant purchases and business payments. Credit-based UPI products and international UPI rollouts in recent years have further expanded the platform's reach and utility.

4. RuPay Debit Cards – Transaction Trends

Graphical Representation:



Tabular Representation:

Year	POS Transactions %	E-Commerce Transactions %	Total Value (In Billion)	Total Volume (In Million)
FY 2019-20	56%	44%	1757	1481
FY 2020-21	51%	49%	2096	1382
FY 2021-22	51%	49%	2196	1290
FY 2022-23	68%	32%	2246	1263
FY 2023-24	68%	32%	2445	1258

RuPay Debit Cards present an interesting paradox: transaction volumes have been declining steadily from 1,481 million in FY 2019-20 to 1,258 million in FY 2023-24 yet transaction values have risen every single year, reaching ₹2,445 billion in FY 2023-24. This divergence tells us something meaningful. Fewer card transactions are happening, but each one is worth more indicating that cards are increasingly being used for higher-value purchases rather than everyday small payments (which have shifted to UPI). The growing dominance of POS transactions (from 56% to 68%) over eCommerce (which fell from 44% to 32%) suggests that in-person, physical card use is holding up better than online card use possibly because UPI has captured a large share of online payments. Despite volume pressures, RuPay cards remain a foundational access tool for Jan Dhan account holders and users in areas with limited smartphone connectivity.

5. Conclusion

Looking across the five-year data for all four products, a few broad patterns emerge. UPI has grown explosively and now dominates the digital payments landscape by a wide margin. AePS has seen healthy growth and continues to serve a critical last-mile banking function, particularly in rural areas. BAP started strong but has faced headwinds possibly from UPI's expanding footprint though it retains a unique value proposition for its specific user segment. RuPay Debit Cards have lost transaction volumes to UPI but are holding their ground in value terms, especially for POS payments. Collectively, these four products reflect a digital payments ecosystem that is maturing, diversifying, and deepening its reach. The shift is not just technological it is behavioural. Users across income levels and geographies are becoming more comfortable with non-cash transactions, often in ways that were hard to imagine a decade ago. That said, the data also reveals some pressure points. The dips in BAP and RuPay volumes suggest that not all products will grow indefinitely, and that market dynamics including competition between products are very much at play. Sustaining growth will require continued investment in user awareness, simpler interfaces, and stronger infrastructure in underserved areas. India's digital payments story is still unfolding. The foundations that have been built over the last five years in terms of technology, regulation, and user adoption are strong. The challenge now is to ensure that the next wave of growth is as inclusive as the last, and that the benefits of digital finance reach those who are still on the margins.

References

- [1]. GFF and MicroSave Consulting. How Digital Payments Drive Financial Inclusion in India. Global Index Framework Report, 2022.
- [2]. National Payments Corporation of India (NPCI). UPI, BHIM, AePS and RuPay product dashboards and analytics. Retrieved from <https://www.npci.org.in>

- [3]. Reserve Bank of India. Annual Reports and Bulletins on Digital Payment Systems. Retrieved from <https://www.rbi.org.in>
- [4]. Government of India. Ministry of Electronics and Information Technology (MeitY) – Digital India Initiatives Reports.
- [5]. Press Information Bureau (PIB). Updates on Digital Financial Literacy and Jan Dhan-Aadhaar-Mobile (JAM) Trinity.
- [6]. Economic Times, Financial Express, and Business Standard. Articles on UPI growth, RuPay adoption, and digital payment trends during the COVID-19 pandemic.

Cite this Article:

Mishra, A., & Asrey, R. (2026). Study of the growth trajectory of select digital payment products for the mass market (past 5 years). *International Journal of Humanities, Commerce and Education*, 2(4), 18–24.

Journal URL: <https://ijbce.com/> **DOI:** <https://doi.org/10.59828/ijbce.v2i4.50>