



Trend and Growth Analysis of AEPS in India: A Secondary Database study

Prof. Ashutosh Chandra Dwivedi¹, Miss Sushma²

¹Head, Department of Applied Economics, Faculty of Commerce, Sri Jai Narain P.G College, Lucknow

²Sri Jai Narain P.G College, Lucknow, India

²Email: sushmagaurav9@gmail.com

Received: 11 August 2026 | Accepted: 28 August 2026 | Published: 15 September 2026

Abstract

Background: The rapid expansion of digital financial services has contributed to the transformation of India's payment ecosystem. The Aadhaar Enabled Payment System (AEPS) is an Aadhaar-based payment mechanism that facilitates various banking transactions through assisted banking channels. Understanding the changing pattern of AEPS transactions is important for assessing its growth within India's digital financial ecosystem.

Objective: The study aims to analyze the trends in AEPS transactions in India during the study period and to examine the growth of AEPS transaction volume and transaction value using appropriate growth measures.

Methodology: The study is based on secondary data obtained from the AEPS Product Statistics of the National Payments Corporation of India (NPCI). The analysis covers the period from 2018–19 to 2025–26. Transaction volume and transaction value are examined using trend analysis, Annual Growth Rate (AGR) and Compound Annual Growth Rate (CAGR).

Findings: The analysis reveals a continuous increase in AEPS transaction volume during the study period, rising from 1,694.10 million transactions in 2018–19 to 6,281.21 million transactions in 2025–26. Transaction value also increased substantially from ₹67,015.78 crore to ₹3,28,194.19 crore, although fluctuations were observed during the later years. The transaction volume recorded a CAGR of 20.59%, while transaction value recorded a higher CAGR of 25.48%. The results indicate substantial overall growth in AEPS transaction activity during the study period.

Conclusion: The study concludes that AEPS experienced significant growth in both transaction volume and transaction value during the study period. The sustained increase in transaction activity highlights the expanding use of AEPS within India's digital financial ecosystem and provides evidence of its growing relevance as a channel for digitally enabled financial transactions.

Keywords: Aadhaar Enabled Payment System (AEPS); Digital Payments; Transaction Volume, Transaction Value; Annual Growth Rate (AGR); Compound Annual Growth Rate (CAGR); Financial Services; India.

1. Introduction

The rapid development of digital financial services has brought significant changes to the way financial transactions are conducted in India. The expansion of digital payment infrastructure, increased access to banking services and the growing use of technology have contributed to the transformation of the country's financial ecosystem. Alongside conventional banking channels various digital and technology-enabled payment mechanisms have emerged to facilitate convenient and accessible financial transactions.

The Aadhaar Enabled Payment System (AEPS) is one such payment mechanism that enables customers to undertake selected banking transactions through Aadhaar-based authentication. AEPS facilitates services such as cash withdrawal, cash deposit, balance enquiry and fund transfer through participating banking channels and Business Correspondents. By using

Aadhaar authentication, the system provides an alternative channel for accessing banking services without requiring conventional payment instruments for every transaction.

The development of AEPS is particularly relevant in the context of India's expanding digital financial infrastructure. The system has enabled transactions to be carried out through assisted banking channels and has become a part of the country's broader digital payment ecosystem. The increasing availability of AEPS services has also resulted in a growing volume and value of transactions over the years.

Therefore, examining the changing pattern of AEPS transactions is important for understanding its development over time. Although the growth of digital payment systems in India has received considerable attention, the systematic examination of AEPS transaction volume and transaction value over a continuous period remains important. Transaction volume provides information about the number of transactions processed through the system, whereas transaction value indicates the monetary magnitude of those transactions. Analyzing both indicators together provides a more comprehensive understanding of the development of AEPS.

In addition to examining the trend, measuring the rate of growth provides further insight into the changing pace of AEPS expansion. Annual Growth Rate (AGR) helps identify year-to-year changes, while Compound Annual Growth Rate (CAGR) provides an indication of the average annual growth over the entire study period. The use of these measures therefore enables a more systematic assessment of the growth pattern of AEPS transactions.

Against this background, the present study focuses on the trend and growth of AEPS transactions in India using secondary data. The study examines changes in transaction volume and transaction value during the selected study period and applies trend analysis, Annual Growth Rate and Compound Annual Growth Rate to assess the pattern and extent of growth.

2. Review of Literature

Ansari and Khan (2018) examined the progress and challenges of e-banking in India during the period 2011–2016, with additional insights into the post-demonetization phase. The study found that rapid advancements in information technology, increasing internet penetration, and policy initiatives by the Reserve Bank of India (RBI) and the National Payments Corporation of India (NPCI) significantly accelerated the adoption of electronic banking services. The authors reported substantial growth in e-banking channels, including ATMs, POS terminals, NEFT, RTGS, debit and credit cards, and mobile banking. Among these, mobile banking recorded the highest compound annual growth rate (CAGR) in terms of transaction volume and value, primarily due to the increasing availability of affordable smartphones. The study further observed that, following demonetization, UPI and USSD were the only electronic payment modes to register significant growth, while other payment channels experienced relatively slower expansion. The authors concluded that although e-banking has strengthened India's transition towards a cashless economy, concerns related to security, privacy, trust, and digital infrastructure remain major challenges that require policy attention.

Gupta, Kapoor, and Yadav (2020), in their study "Acceptance Towards Digital Payments and Improvements in Cashless Payment Ecosystem," examined the factors influencing the adoption of digital payment systems in India under the Digital India initiative. Using secondary literature along with surveys and interviews conducted among users in Delhi-NCR, the study identified key barriers to digital payment adoption, including inadequate digital literacy, security and privacy concerns, poor internet connectivity, limited merchant acceptance, and complex transaction procedures. The authors also highlighted the increasing use of digital payments by minors and proposed innovative solutions such as blockchain-based digital wallets, shared wallets, biometric authentication, interoperable payment platforms, improved grievance redressal mechanisms, and simplified transaction protocols. The study concluded that while government initiatives have accelerated digital payment adoption, addressing technological, regulatory, and user-centric challenges is essential for strengthening India's cashless payment ecosystem and achieving wider acceptance of digital payments.

Mahesh and Bhat (2022) investigated the growth and significance of the Unified Payments Interface (UPI) in India's digital payment ecosystem using secondary data and SWOT analysis. The study found that initiatives such as Digital India, demonetization, increasing smartphone penetration, and improved internet connectivity have significantly accelerated UPI adoption. UPI has emerged as a secure, cost-effective, and user-friendly payment platform that enables instant fund transfers through a Virtual Payment Address (VPA) without requiring users to share bank account details.

The authors reported substantial growth in UPI transactions, particularly after the COVID-19 pandemic, as consumers increasingly preferred contactless payment methods. They identified UPI's major strengths as simplicity, innovation, security, interoperability, and affordability, making it a key driver of retail digital payments and financial inclusion. However, the study also highlighted challenges such as cybersecurity risks, internet dependency, and limited accessibility for the unbanked population. The authors concluded that UPI has significant potential to strengthen India's cashless economy, while emphasizing the need for improved digital infrastructure and further research on consumer adoption and the broader digital payment ecosystem.

Mishra, A. K., & Tripathi, D. (2022), "Growth of Digital Payment System in India: A Trend Analysis," examined the growth trends of major digital payment systems in India, focusing on National Payments Corporation of India (NPCI) platforms, including NACH, UPI, USSD, BHIM, AEPS, BBPS, and IMPS, during the period 2016–17 to 2021–22. The study adopted a descriptive research design and employed trend analysis using secondary data obtained from NPCI. The findings revealed a significant increase in the transaction volume and value of most digital payment systems, indicating rapid growth in digital payment adoption across the country. However, the USSD platform experienced a decline in transaction value during the later years of the study. The authors concluded that demonetization, the COVID-19 pandemic, and various government initiatives significantly accelerated the adoption of digital payment systems in India. The trend analysis further suggested that digital payments are expected to continue growing, thereby supporting India's transition towards a cashless economy. The study highlights the increasing importance of AEPS and other NPCI payment platforms in strengthening digital financial services and promoting financial inclusion.

Gupta et al. (2022) examined the growth of digital payment services and changing consumer behaviour in India's metro cities. Using both primary data from 106 respondents and secondary sources, the study identified convenience, efficiency, security, awareness, service variety, infrastructure, and the impact of COVID-19 as the major factors influencing the adoption of digital payments. The findings indicated a significant increase in the use of digital payment modes such as UPI, NEFT, IMPS, mobile banking, and digital wallets, while cash usage declined considerably after the COVID-19 pandemic. The study concluded that technological innovation and supportive government initiatives have accelerated the shift towards digital payments. However, concerns related to security, digital infrastructure, financial literacy, and unequal access continue to affect the sustainable and inclusive adoption of digital payment services.

Bhadra et al. (2023) examined the performance of major electronic payment systems in India during the COVID-19 pandemic using secondary daily data obtained from the Reserve Bank of India (RBI) for the period June 2020 to November 2021. The study employed the GARCH (1,1) model to analyze the volatility of five digital payment systems: RTGS, NEFT, AEPS, UPI, and IMPS. The findings revealed that RTGS, AEPS, and UPI exhibited positive volatility, indicating greater user acceptance and increased usage during the pandemic, whereas NEFT and IMPS showed negative volatility. The authors concluded that AEPS, UPI, and RTGS emerged as more preferred digital payment methods during the pandemic and recommended government interventions to improve the accessibility and adoption of NEFT and IMPS to strengthen India's digital payment ecosystem.

Singh, Gupta, and Agarwal (2024) analyzed the growth of India's digital payment system and highlighted its transition from paper-based transactions to a digital payment ecosystem. The study found that government initiatives such as Digital India, Pradhan Mantri Jan Dhan Yojana, and demonetization, along with increased internet access, smartphone penetration, and financial inclusion, significantly accelerated digital payment adoption. It reported substantial growth in digital transactions between 2017–18 and 2023–24, with UPI emerging as the dominant payment mode, while RTGS remained important for high-value transactions. The study also identified the COVID-19 pandemic as a major catalyst for digital payment adoption. However, it emphasized that cybersecurity risks remain a key challenge, requiring stronger security measures to sustain consumer trust and support India's transition towards a cashless economy.

Singh and Devi (2024), in their study "A Trend Analysis of Growth Pattern of Digital Modes of Payments in India," examined the growth trajectory of digital payment systems in India using secondary data collected from the Reserve Bank of India (RBI). The study employed Compound Annual Growth Rate (CAGR) and trend line analysis to assess the growth and predict future trends in digital payment modes. The findings revealed that digital payments recorded an average

annual growth of 38% in transaction volume and 9% in transaction value, indicating rapid expansion in digital payment adoption. Among various payment instruments, UPI emerged as the fastest-growing mode with an average annual growth of 234%, reflecting its widespread acceptance due to increasing smartphone usage, internet accessibility, and supportive digital infrastructure. The study also found that credit transfers experienced the highest growth, whereas debit transfers declined because of the availability of more convenient payment alternatives. Furthermore, the authors identified demonetization and the COVID-19 pandemic as major catalysts accelerating digital payment adoption. The study concluded that India's digital payment ecosystem has experienced sustained exponential growth and possesses strong future growth potential, although cyber fraud and security concerns remain significant challenges requiring continued policy attention.

Nikita and Bhatt (2024) investigated the growth of mobile banking in India and analyzed the factors driving its expansion using trend analysis. The study found that government initiatives such as Digital India, along with demonetization and the COVID-19 pandemic, significantly accelerated the adoption of mobile banking services. The authors reported a consistent increase in both the volume and value of mobile banking transactions, indicating growing consumer acceptance of digital financial services. The study further highlighted that mobile banking has strengthened financial inclusion by improving access to banking services, reducing reliance on cash, and enhancing transparency in financial transactions. However, challenges such as limited digital literacy, inadequate internet connectivity, and lower adoption in rural areas remain barriers to sustained growth. The authors concluded that strengthening digital infrastructure, improving financial awareness, and fostering collaboration between the government, banks, and fintech firms are essential for the continued expansion of mobile banking in India.

Ahmad and Arshad (2025), in their study *A Study of Cashless Economy after Demonetization and its Impact on Economic Growth with Special Reference to Sustainable Development Goals*, examined the contribution of the cashless economy to economic growth and sustainable development in post-demonetization India. The study found that digital payment systems such as UPI, mobile banking, digital wallets, and online banking have strengthened financial inclusion, promoted entrepreneurship, and supported innovation and employment generation. The authors highlighted that a cashless economy contributes to the Sustainable Development Goals (SDGs) by reducing paper currency usage, conserving resources, and minimizing environmental impact. However, they also identified inadequate digital infrastructure, cybersecurity concerns, and limited digital literacy as major barriers to widespread adoption. The study concluded that strengthening digital infrastructure, regulatory frameworks, and cybersecurity measures is essential for achieving a secure, inclusive, and sustainable cashless economy in India.

3. Research Gap

Existing research on digital payments in India has given considerable attention to platforms such as UPI, mobile wallets and internet banking, while comparatively less attention has been given to the systematic analysis of AEPS transaction trends and growth. In particular, limited studies have examined both transaction volume and transaction value using quantitative measures such as Annual Growth Rate (AGR) and Compound Annual Growth Rate (CAGR) over a continuous period. Therefore, the present study addresses this gap by analyzing the trend and growth of AEPS transactions in India using secondary data from official sources.

4. Objectives of the Research study

1. To analyses the trends in AEPS transactions in India during the study period.
2. To examine the growth of AEPS transaction volume and value using appropriate growth measures.

Statement of the problem

The expansion of digital financial services has increased the importance of understanding the development of different payment mechanisms in India. AEPS has emerged as an important channel for Aadhaar-enabled banking transactions, and its transaction activity has changed considerably over time. However, an increase in transaction activity may not necessarily occur at the same pace every year, and changes in transaction volume may also differ from changes in transaction value. Therefore, there is a need to examine the year-wise trend of AEPS transaction volume and transaction value and to determine how rapidly these indicators have grown during the study period. Merely observing the increase or

decrease in transaction figures does not provide sufficient information about the pace and consistency of growth. Applying appropriate growth measures such as Annual Growth Rate and Compound Annual Growth Rate can provide a clearer understanding of year-to-year variations as well as long-term growth.

In this context, the present study attempts to address the following research problem: What has been the trend of AEPS transaction volume and transaction value in India during the selected study period, and what has been the rate and extent of their growth? The study uses secondary data to systematically analyze these aspects and thereby provides an empirical overview of the development of AEPS transactions in India.

5. Research Methodology

Research Design

The present study follows a descriptive and analytical research design to examine the trend and growth of the Aadhaar Enabled Payment System (AEPS) in India. The descriptive component presents the year-wise movement of AEPS transactions, while the analytical component evaluates changes in transaction volume and transaction value over the selected period. The study relies on secondary numerical data and uses growth measures and graphical techniques to assess the development of AEPS.

Nature of the Study

The study is quantitative in nature and is based entirely on secondary information. It focuses on measuring changes in AEPS transaction activity over time rather than examining the opinions or behaviour of individual users. The analysis concentrates on transaction volume and transaction value and uses Annual Growth Rate (AGR), Compound Annual Growth Rate (CAGR), and trend analysis to assess the growth pattern of AEPS in India.

Sources of data

The study is based on secondary data collected primarily from the official statistical information published by the National Payments Corporation of India (NPCI). AEPS transaction statistics available through the NPCI database were used as the principal source for the quantitative analysis. The original information was available on a monthly basis and was subsequently organized into financial-year totals for analysis.

Relevant information from official publications of institutions such as the Reserve Bank of India (RBI), Government of India documents, academic journals, research articles and other credible secondary sources may also be used to provide background and contextual support to the study.

Data Collection and Processing

The study uses secondary data on Aadhaar Enabled Payment System (AEPS) transactions obtained from the official database of the National Payments Corporation of India (NPCI). The data were available on a monthly basis and were compiled and organized according to the study period. Monthly transaction volume and transaction value were aggregated to obtain annual figures. The processed annual data were then used for trend analysis, Annual Growth Rate (AGR), and Compound Annual Growth Rate (CAGR). The data were also presented graphically to clearly illustrate the changing pattern and growth of AEPS transactions in India.

Study Period

The study covers the period from 2018-19 to 2025-26. The AEPS statistics were initially collected in monthly form and subsequently consolidated into annual financial-year figures. The selected period enables the study to examine the development and growth pattern of AEPS over successive years.

Variables of the Study

The study considers two principal indicators for evaluating the performance of AEPS:

a) AEPS Transaction Volume:

This represents the number or volume of AEPS transactions recorded during a particular financial year. It is used to assess changes in the frequency and utilization of AEPS services over time.

b) AEPS Transaction Value:

This represents the monetary value associated with AEPS transactions during a particular financial year. It is used to assess changes in the financial scale of AEPS transactions.

These two indicators together provide a basis for examining both the extent of transaction activity and the monetary magnitude of AEPS usage.

Tools and Techniques of Data Analysis

The collected data were organized and analyzed using Microsoft Excel. Since the original AEPS information was available on a monthly basis, the monthly observations were aggregated to obtain annual financial-year figures.

The following techniques were used:

a) Annual Data Aggregation

Monthly AEPS observations were added to obtain annual transaction totals.

$$\text{Annual Transaction Volume} = \sum \text{Monthly Transaction Volume}$$

$$\text{Annual Transaction Value} = \sum \text{Monthly Transaction Value}$$

This conversion enabled year-wise comparison of AEPS performance.

b) Trend Analysis

Trend analysis was employed to examine the direction and movement of AEPS transaction volume and transaction value during the study period. Line graphs were prepared to visually represent the year-wise changes and identify the overall pattern of AEPS transactions.

c) Annual Growth Rate (AGR)

Annual Growth Rate was calculated to measure the percentage change in AEPS transaction volume and transaction value from one financial year to the next.

AGR helps identify years showing relatively higher, lower or negative year-on-year growth.

$$\text{AGR} = \frac{\text{Current Year Value} - \text{Previous Year Value}}{\text{Previous Year}} \times 100$$

d) Compound Annual Growth Rate (CAGR)

Compound Annual Growth Rate was used to estimate the annualized rate at which AEPS transaction volume and transaction value grew over the entire study period.

$$\text{CAGR} = \left[\left(\frac{\text{Ending Value}}{\text{Beginning Value}} \right)^{\frac{1}{n}} - 1 \right] \times 100$$

where n represents the number of growth intervals between the beginning and ending observations. CAGR provides a single measure of the overall growth performance of AEPS during the selected period.

e) Graphical Presentation

Tables and line graphs were used to present the annual AEPS data and illustrate the movement of transaction volume and transaction value. Graphical presentation facilitates comparison across financial years and makes the observed growth patterns easier to interpret.

Scope of the Study

The study is confined to the Aadhaar Enabled Payment System (AEPS) in India and focuses on its transaction performance during the selected study period. The analysis covers AEPS transaction volume and transaction value using secondary data published by NPCI. The study examines the year-wise trend and growth of AEPS through annual data, AGR, CAGR and graphical analysis.

The study considers AEPS as one of the digital payment mechanisms that can support the development of India's broader digital and cashless payment ecosystem. However, the study does not attempt to measure the entire cashless economy or all digital payment instruments in India.

Limitations of the Study

The study has certain limitations. First, it is based entirely on secondary data and therefore depends upon the availability, accuracy and consistency of published information. Second, the quantitative analysis is primarily focused on AEPS transaction volume and transaction value and does not examine individual users' attitudes, awareness or behavioural factors. Third, the study uses trend and growth measures and therefore does not establish a direct causal relationship between AEPS growth and the overall transition towards a cashless economy. Finally, other economic, technological, regulatory and socio-demographic factors that may influence AEPS usage are not examined separately.

6. Data Analysis and Results and Interpretation

Introduction

The present chapter analyses the performance of the Aadhaar Enabled Payment System (AEPS) in India during the selected study period. The analysis is based on secondary data obtained primarily from the National Payments Corporation of India (NPCI). The original monthly AEPS observations were consolidated into annual financial-year figures to facilitate year-wise comparison. The analysis focuses mainly on AEPS transaction volume and transaction value. To examine the development and growth pattern of AEPS, the study employs annual trend analysis, Annual Growth Rate (AGR), and Compound Annual Growth Rate (CAGR). Tables and graphical presentations are used to present the results in a systematic manner.

(1) Trend Analysis of AEPS Transactions in India

First, present your final yearly dataset here.

Table 1: Year-wise AEPS Transaction Volume and Transaction Value in India

Financial Year	Volume (Million)	Value (Crore)
2018-19	1694.1	67,015.78
2019-20	2330.08	1,17,561.24
2020-21	3921.04	2,26,049.79
2021-22	4314.03	3,00,392.81
2022-23	4859.44	3,34,971.94
2023-24	5533.09	3,14,877.38
2024-25	6109.36	2,99,171.00
2025-26	6281.21	3,28,194.19

Source: Compiled by the researcher from NPCI Aeps Product Statistics

Table1 presents the year-wise transaction volume and transaction value of AEPS in India during the period 2018–19 to 2025–26. The data show that transaction volume increased continuously throughout the study period, rising from 1,694.10 million transactions in 2018–19 to 6,281.21 million transactions in 2025–26. This indicates a considerable expansion in the utilization of AEPS services over the period.

Transaction value also recorded substantial growth during the initial years, increasing from ₹67,015.78 crore in 2018–19 to ₹3,34,971.94 crore in 2022–23. However, the value declined during 2023–24 and 2024–25 before recovering to ₹3,28,194.19 crore in 2025–26. Thus, the findings indicate a sustained increase in AEPS transaction volume, while transaction value experienced some fluctuations during the later part of the study period.

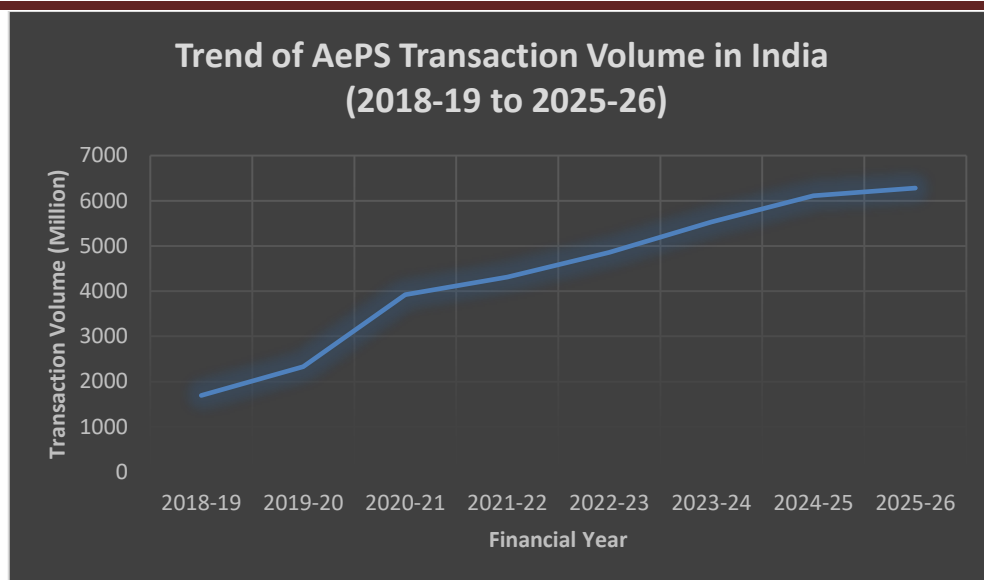


Figure 1: Trend of AEPS Transaction Volume in India

Source: Compiled by the researcher from NPCI AePS Product Statistics

The figure depicts the trend in AEPS transaction volume in India during the period 2018–19 to 2025–26. The transaction volume shows a continuous upward movement throughout the study period, increasing from 1,694.10 million transactions in 2018–19 to 6,281.21 million transactions in 2025–26. A notable increase can be observed between 2019–20 and 2020–21, after which the transaction volume continued to rise at a comparatively steady pace. The highest transaction volume was recorded in 2025–26, while the lowest was observed in 2018–19. The sustained increase in transaction volume indicates growing utilization of AEPS as an accessible digital financial transaction channel in India.

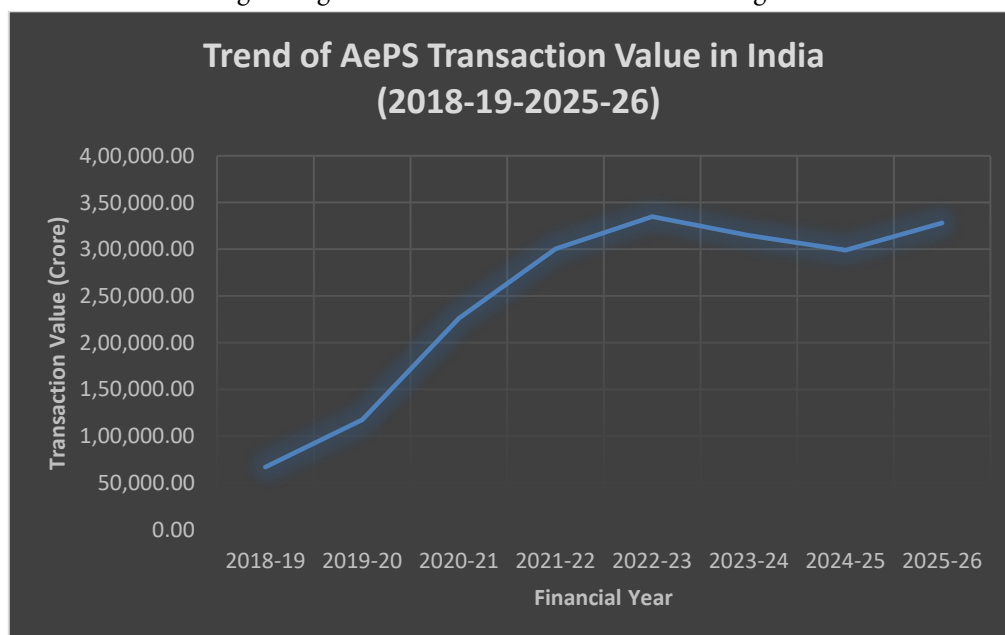


Figure 2: Trend of AEPS Transaction Value in India

Source: Compiled by the researcher from NPCI AePS Product Statistics

The figure presents the trend in AEPS transaction value in India during the period 2018–19 to 2025–26. The transaction value shows a substantial increase during the initial years of the study period, rising from ₹67,015.78 crore in 2018–19 to ₹3,34,971.94 crore in 2022–23. The value reached its highest level in 2022–23, indicating considerable growth in the monetary value of transactions processed through AEPS. However, a decline can be observed in 2023–24 and 2024–25, when the transaction value decreased to ₹3,14,877.38 crore and ₹2,99,171.00 crore, respectively. In 2025–26, the transaction value recovered to ₹3,28,194.19 crore. Overall, the figure indicates a strong growth in AEPS transaction value over the study period, although some fluctuations were observed during the later years.

(2) Growth Analysis of AEPS Transactions

To examine the year-to-year changes in AEPS transactions, the annual growth rate of transaction volume and transaction value was calculated for the study period. The growth rate helps to assess the pace of change in AEPS transaction activity across different financial years and identifies periods of relatively higher or lower growth.

Financial Year	Volume (Million)	Volume Growth Rate (%)	Value (Crore)	Value Growth Rate (%)
2018-19	1,694.10	NA	67,015.78	NA
2019-20	2,330.08	37.54	1,17,561.24	75.42
2020-21	3,921.04	68.28	2,26,049.79	92.28
2021-22	4,314.03	10.02	3,00,392.81	32.89
2022-23	4,859.44	12.64	3,34,971.94	11.51
2023-24	5,533.09	13.86	3,14,877.38	-6.00
2024-25	6,109.36	10.41	2,99,171.00	-4.99
2025-26	6,281.21	2.81	3,28,194.19	9.70

Source: Calculated by the Researcher based on NPCI AEPS Product Statistics

Note: — indicates that the annual growth rate is not applicable for 2018–19 because it is the first year of the study period and no previous-year data are available for comparison.

The growth analysis reveals that AEPS transaction volume recorded positive annual growth throughout the study period. The highest growth in transaction volume was observed in 2020–21 at 68.28%, followed by 37.54% in 2019–20. After 2020–21, the growth rate moderated but remained positive, indicating continued expansion in the number of AEPS transactions. In terms of transaction value, the highest annual growth was recorded in 2020–21 at 92.28%, following a growth of 75.42% in 2019–20. The growth in transaction value remained positive up to 2022–23, although the rate gradually declined. However, transaction value registered negative growth of 6.00% in 2023–24 and 4.99% in 2024–25 before recovering to positive growth of 9.70% in 2025–26. Overall, the findings indicate that AEPS transaction volume expanded consistently during the study period, whereas transaction value experienced greater variation, particularly during the later years.

Table 3: Compound Annual Growth Rate (CAGR) of AEPS Transaction Volume and Transaction Value

Indicators	2018-19 (Beginning)	2025-26 (Ending)	CAGR (%)
Transaction Volume (Million)	1,694.10	6,281.21	20.59
Transaction Value (Crore)	67,015.78	3,28,194.19	25.48

Source: Calculated by the researcher based on NPCI AEPS Product Statistics

The CAGR analysis indicates that both AEPS transaction volume and transaction value experienced substantial growth during the study period. The transaction volume recorded a compound annual growth rate of 20.59%, increasing from 1,694.10 million transactions in 2018–19 to 6,281.21 million transactions in 2025–26. During the same period, transaction value recorded a higher CAGR of 25.48%, rising from ₹67,015.78 crore to ₹3,28,194.19 crore. The higher CAGR of transaction value compared with transaction volume indicates that the monetary value of AEPS transactions expanded at a faster average annual rate than the number of transactions. Overall, the CAGR results demonstrate considerable long-term growth in AEPS transaction activity during the study period.

7. Major Findings of the Study

1. The analysis shows a clear upward trend in AEPS transaction volume during the study period from 2018–19 to 2025–26. Transaction volume increased from 1,694.10 million in 2018–19 to 6,281.21 million in 2025–26, indicating substantial expansion in AEPS transaction activity.
2. AEPS transaction value also increased considerably over the study period, rising from ₹67,015.78 crore in 2018–19 to ₹3,28,194.19 crore in 2025–26. However, unlike transaction volume, transaction value experienced fluctuations during the later years.

3. Annual Growth Rate (AGR) analysis indicates positive growth in transaction volume throughout the study period. The highest annual growth in volume was recorded in 2020–21 at 68.28%, while the growth rate declined to 2.81% in 2025–26, indicating a slowing pace of expansion in the final year.
4. Transaction value recorded considerable year-to-year variations. It registered its highest annual growth of 92.28% in 2020–21, followed by positive growth in subsequent years until 2022–23. However, transaction value recorded negative growth of 6.00% in 2023–24 and 4.99% in 2024–25, before recovering to 9.70% growth in 2025–26.
5. The CAGR analysis confirms strong long-term growth in both indicators. AEPS transaction volume recorded a CAGR of approximately 20.59%, while transaction value recorded a higher CAGR of approximately 25.48% during the study period.
6. Overall, the findings indicate that AEPS transactions expanded substantially during 2018–19 to 2025–26. Transaction volume showed a relatively consistent upward movement, whereas transaction value displayed greater fluctuations in the later years. The positive CAGR for both indicators confirms sustained long-term growth in AEPS transaction activity.

8. Discussion

The findings reveal a clear overall growth in AEPS transaction activity in India during 2018–19 to 2025–26. Transaction volume increased consistently from 1,694.10 million to 6,281.21 million, indicating sustained expansion in AEPS usage. Transaction value also increased substantially from ₹67,015.78 crore to ₹3,28,194.19 crore, although some fluctuations were observed during the later years.

The AGR analysis shows that transaction volume maintained positive annual growth, while transaction value experienced greater year-to-year variation, including negative growth in 2023–24 and 2024–25 before recovering in 2025–26. The CAGR results further confirm strong long-term growth, with transaction volume recording 20.59% and transaction value 25.48%.

Overall, the results indicate that AEPS transaction activity expanded considerably during the study period. While transaction volume followed a relatively consistent upward trend, transaction value showed greater variation, particularly in the later years. These findings provide a clear picture of the changing trend and growth pattern of AEPS transactions in India.

9. Conclusion

The present study analysed the trend and growth of Aadhaar Enabled Payment System (AEPS) transactions in India during the period from 2018–19 to 2025–26. The study used secondary data and examined AEPS transaction volume and transaction value through trend analysis, Annual Growth Rate (AGR) and Compound Annual Growth Rate (CAGR). The findings related to the first objective show that AEPS transaction volume followed a clear upward trend throughout the study period. The volume increased from 1,694.10 million transactions in 2018–19 to 6,281.21 million transactions in 2025–26. Transaction value also increased substantially, from ₹67,015.78 crore to ₹3,28,194.19 crore, although some fluctuations were observed during the later years.

In relation to the second objective, the growth analysis indicates that AEPS transaction volume recorded positive annual growth throughout the study period, although the rate of growth varied across years. Transaction value showed comparatively greater year-to-year fluctuations. The CAGR analysis further confirms substantial long-term growth, with transaction volume recording a CAGR of 20.59% and transaction value recording a CAGR of 25.48%.

Overall, the study concludes that AEPS transaction activity expanded considerably in India during the selected study period. The increasing transaction volume and positive CAGR values demonstrate sustained long-term growth, while variations in transaction value indicate that the pace of growth was not uniform across all years. The study therefore provides a quantitative assessment of the changing trend and growth pattern of AEPS transactions in India.

Recommendations

Based on the findings of the study, the following recommendations are suggested:

1. **Strengthen AEPS infrastructure:** Banks and relevant stakeholders should continue improving the technological infrastructure supporting AEPS to ensure efficient and reliable transaction processing.

2. **Reduce transaction failures:** Greater attention should be given to improving system reliability and reducing unsuccessful transactions so that users can access AEPS services more effectively.
3. **Increase awareness:** Financial and digital literacy initiatives should be strengthened to improve awareness about AEPS services and their appropriate use.
4. **Enhance security:** Continuous improvement in authentication and transaction-security mechanisms should be encouraged to maintain user confidence in AEPS-based transactions.
5. **Monitor growth patterns:** Financial institutions and policymakers should regularly monitor changes in AEPS transaction volume and value to identify emerging trends and variations in transaction activity.
6. **Improve service accessibility:** Adequate availability of AEPS services through assisted banking channels should be maintained to facilitate convenient access to digital financial services.

Scope for Future Research

Future studies may extend the present analysis by examining AEPS trends and growth across different states or regions of India. Comparative studies involving AEPS and other digital payment systems may also provide broader insights into the development of India's digital financial ecosystem. Further research may incorporate primary data to examine user adoption, satisfaction and usage behaviour, while additional variables and advanced statistical techniques could be used to investigate factors associated with changes in AEPS transaction activity.

References

- [1]. Ansari, S. J., & Khan, N. A. (2017). E-banking in India: Progress and challenges. *International Journal of Innovative Research and Advanced Studies*, 4(8), 334–340. [IJIRAS article PDF](#)
- [2]. Gupta, R., Kapoor, C., & Yadav, J. (2020). Acceptance towards digital payments and improvements in cashless payment ecosystem. In *2020 International Conference for Emerging Technology (INCET)* (pp. 1–9). IEEE. <https://doi.org/10.1109/INCET49848.2020.9154024>
- [3]. Mahesh, A., & Bhat, G. (2022). Digital payment service in India: A case study of Unified Payment Interface. *International Journal of Case Studies in Business, IT and Education*, 6(2), 430–446. <https://doi.org/10.47992/IJCSBE.2581.6942.0213>
- [4]. Mishra, A. K., & Tripathi, D. (2022). Growth of digital payment system in India: A trend analysis. *Shodh Drishti (An International Peer Reviewed Refereed Research Journal)*, 13(9), 97–106. https://www.researchgate.net/publication/371686757_Growth_of_Digital_Payment_System_in_India_A_Trend_Analysis
- [5]. Gupta, N., Kaur, A., & Shetty, S. (2022). A study on the growing innovation and changing consumer behavior towards digital payment services in metro cities. *Annals of “Dunarea de Jos” University of Galati, Fascicle I: Economics and Applied Informatics*, 28(1), 159–170. <https://doi.org/10.35219/eai15840409258>
- [6]. Bhadra, S., Naaz, S., & Ghosh, R. (2023). The e-payment trajectory during the pandemic – The case of India. *Management Journal for Advanced Research*, 3(1), 21–25. <https://doi.org/10.54741/mjar.3.1.4>
- [7]. Singh, A. K., Gupta, V. K., & Agarwal, K. K. (2024). Digital revolution: Analyzing the growth of payment systems in India. *International Journal of Scientific Development and Research*, 9(9), 330–337.
- [8]. Singh, S., & Devi, A. (2024). A trend analysis of growth pattern of digital modes of payments in India. *IOSR Journal of Economics and Finance*, 15(1, Series I), 66–74. <https://doi.org/10.9790/5933-1501016674>
- [9]. Nikita, T. A., & Bhatt, B. (2024). Growth of mobile banking in India: Comprehensive study. *Educational Administration: Theory and Practice*, 30(1), 3403–3417. <https://doi.org/10.53555/kuey.v30i1.7228>
- [10]. Ahmad, M. O., & Arshad, K. (2025). A study of cashless economy after demonetization and its impact on economic growth with special reference to sustainable development goals. *International Scientific Journal of Engineering and Management (ISJEM)*, 4(4), 1–6. <https://doi.org/10.55041/ISJEM02533>

- [11]. National Payments Corporation of India. (n.d.). AePS product statistics. Retrieved August 6, 2026, from <https://www.npci.org.in/what-we-do/aeps/product-statistics>

Cite this Article:

Dwivedi, A. C., & Sushma (2026). Trend and growth analysis of AEPS in India: A secondary database study. *International Journal of Humanities, Commerce and Education*, 2(9), 18–29.

Journal URL: <https://ijhce.com/> ***DOI:*** <https://doi.org/10.59828/ijhce.v2i9.123>

Disclaimer/Publisher's Note: The author(s) are solely responsible for the content and claims of this article. The publisher and editors assume no legal liability for any errors, copyright violations, or damages arising from its use.