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Growth and Transaction Dynamics of Unified Payments Interface (UPI) in India: An Empirical Analysis of NPCI Data (June 2025–March 2026)

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Abstract:
The study examines the growth and transaction dynamics of India's Unified Payments Interface (UPI) over ten months, from June 2025 to March 2026, using official monthly product statistics published by the National Payments Corporation of India (NPCI).
Design/Methodology: The study is descriptive and analytical and rests on secondary data. It uses month-on-month (MoM) growth rates, the compound monthly growth rate (CMGR), index numbers, descriptive statistics, linear and log-linear trend regression, Pearson correlation, a log-log elasticity model and an independent-samples t-test. Average ticket size (ATS) is derived from value and volume.
Findings: Monthly UPI volume rose from 18,395.01 million to 22,641.14 million transactions (+23.08%), and value rose from ₹24.04 lakh crore to ₹29.53 lakh crore (+22.82%). Both series show a significant upward trend (volume: $R^2 = 0.760$, $p = 0.001$; value: $R^2 = 0.804$, $p < 0.001$). Average daily volume grew in every one of the nine months, with a near-perfect linear trend ($R^2 = 0.989$). Volume and value are very strongly correlated ($r = 0.967$, $p < 0.001$), with a value–volume elasticity of 1.07. ATS stayed stable at about ₹1,293 (CV = 1.80%) and showed no significant trend ($p = 0.233$). Raw monthly totals swing with the number of days in a month; day-adjusted measures reveal steady growth.
Originality/Value: The study provides one of the first empirical analyses of UPI's most recent high-frequency data (FY 2025–26). It shows that UPI growth in this phase is driven by more transactions rather than larger transactions, which points to deepening everyday and small-merchant use.

Keywords: Unified Payments Interface, UPI, NPCI, digital payments, transaction volume, average ticket size, trend analysis, financial inclusion
JEL Classification: E42, G21, O33

1. Introduction

India's payment system has shifted decisively from cash to digital channels over the past decade, and the Unified Payments Interface (UPI) has led that shift. UPI was launched in April 2016 by the National Payments Corporation of India (NPCI), the umbrella body for retail payments set up under the guidance of the Reserve Bank of India (RBI) and the Indian Banks' Association. It lets a user link several bank accounts to one mobile application and send or receive money instantly, 24×7, through a virtual payment address or a QR code.

UPI's rise has reshaped India's retail payments. According to the RBI's *Payment System Report* (January 2025), UPI's share of digital payment volume rose from 34% in calendar year 2019 to 83% in 2024. Features such as UPI AutoPay, UPI Lite, RuPay credit cards on UPI and cross-border linkages have widened its use. As UPI matures, the question is no longer whether it will grow but how it is growing: through more users and more frequent payments, or through larger payments.

Most existing studies examine either user adoption behaviour through survey data or long-run annual trends. Fewer studies examine recent monthly data, where calendar effects, festival seasons and the size of an average payment can be observed directly. This paper fills that gap. It analyses NPCI's monthly UPI product statistics from June 2025 to March 2026, which cover the first quarter-end through the last month of financial year 2025–26.

1.1 Significance of the Study

- **For policymakers:** month-level evidence on whether UPI growth is steady, seasonal or slowing helps the RBI and NPCI plan system capacity and policy on market share caps and merchant fees.
- **For banks and payment service providers:** the stability of the average ticket size indicates whether growth comes from small everyday payments, which shapes product and pricing decisions.
- **For researchers:** the study offers a replicable statistical framework for analysing high-frequency payment data.

1.2 Structure of the Paper

Section 2 reviews the literature. Section 3 states the research gap, objectives and hypotheses. Section 4 describes the methodology. Section 5 presents the analysis with tables and figures. Sections 6 to 9 present the findings, suggestions, limitations and conclusion.

2. Review of Literature

The four studies below were selected because together they cover the two main streams of UPI research: aggregate growth trends drawn from NPCI and RBI data, and individual-level adoption behaviour.

Kuriakose and Sajoy (2023), writing in the *Journal of Telecommunications and the Digital Economy*, studied the strategies and challenges of UPI in facilitating India's digital payment system. They used UPI volume data from NPCI product statistics and RBI annual reports for 2016–17 to 2021–22 and fitted a polynomial trendline to project future volume. Their projection reached about 442 billion transactions in 2026–27, or roughly 1.21 billion a day, which suggests the one-billion-a-day target is achievable. They concluded that this pace depends on solving infrastructure problems such as transaction failures and dispute resolution, and access problems such as limited rural internet and low person-to-merchant (P2M) use.

Razi-ur-Rahim, Rabbani, Uddin and Shaikh (2024), in *Digital Business* (Elsevier), examined UPI adoption among Indian urban users using an extended meta-UTAUT model. Data from 894 urban users, collected through purposive sampling, were analysed with covariance-based structural equation modelling (CB-SEM). Performance expectancy significantly influenced use behaviour, attitude influenced behavioural intention, and trust shaped attitude. The model explained 82.7% of the variance in attitude and 84.1% in use behaviour.

Rai (2025), in *Commerce Research Review*, traced UPI's role in India's move from cash to digital payments using RBI and NPCI data for FY 2017–18 to FY 2023–24. The study found rapid growth in adoption and a clear shift from person-to-person (P2P) to P2M transactions, which signals growing commercial use. It noted that UPI AutoPay, UPI Lite and credit card linkage widened access, while cybersecurity risk, server capacity and low digital literacy remain obstacles.

Ghosh (2026), in *Banks and Bank Systems*, used the World Bank's Global Findex 2025 microdata and a machine-learning causal forest model to estimate how UPI readiness affects individual-level digital payment adoption. The effects were highly uneven across socioeconomic groups. People facing the greatest affordability and usability constraints showed treatment effects up to 3.7 times larger than the most digitally included groups, which suggests UPI's marginal benefit is greatest among the excluded.

3. Research Gap, Objectives and Hypotheses

3.1 Research Gap

The reviewed studies use annual data up to FY 2023–24 or survey data on adoption intentions. None analyses NPCI's monthly data for FY 2025–26, separates calendar effects from real growth, or tests whether growth is driven by the number of transactions or by their size. This study addresses those three gaps.

3.2 Objectives

- To analyse the trend and growth rate of monthly UPI transaction volume and value from June 2025 to March 2026.
- To compare raw monthly growth with day-adjusted (average daily) growth.
- To examine the relationship between transaction volume and transaction value.
- To assess whether the average ticket size of UPI transactions changed during the study period.
- To compare UPI performance between the first and second halves of the study period.

3.3 Hypotheses

- **H_{01}:** There is no significant linear trend in monthly UPI transaction volume.
- **H_{02}:** There is no significant linear trend in monthly UPI transaction value.
- **H_{03}:** There is no significant correlation between UPI transaction volume and value.
- **H_{04}:** There is no significant trend in the average ticket size of UPI transactions.
- **H_{05}:** There is no significant difference in mean monthly volume and value between the first half (June–October 2025) and the second half (November 2025–March 2026) of the study period.

4. Research Methodology

4.1 Research Design and Data

The study is descriptive and analytical. It uses secondary data from NPCI's *UPI Product Statistics* (monthly trended series). Four variables are used: monthly volume (million transactions), average daily volume (million), monthly value (₹ crore) and average daily value (₹ crore). The study period covers ten months, June 2025 to March 2026 (n = 10).

4.2 Derived Variables

Average ticket size (ATS), the mean value of one UPI transaction in rupees:

$ATS_t = [Value_t\ (₹\ crore) \times 10^7] \div [Volume_t\ (million) \times 10^6]$

Month-on-month growth rate:

$MoM_t = (X_t \div X_{t-1} - 1) \times 100$

Compound monthly growth rate over the nine growth intervals:

$CMGR = [(X\ Mar\ 2026 \div X\ Jun\ 2025)^{(1/9)} - 1] \times 100$

Index number with June 2025 as the base: $Index_t = (X_t \div X_0) \times 100$.

4.3 Statistical Tools

Linear trend model, where t = 1 for June 2025 and t = 10 for March 2026:

$Y_t = a + b \cdot t + \varepsilon_t$

Log-linear (exponential) trend model, from which the compound growth rate is CGR = $(e^b - 1) \times 100$:

$ln\ Y_t = a + b \cdot t + \varepsilon_t$

Value–volume elasticity model, where β measures the percentage change in value for a 1% change in volume:

$ln(Value_t) = \alpha + \beta \cdot ln(Volume_t) + \varepsilon_t$

Other tools: descriptive statistics (mean, standard deviation, coefficient of variation), Pearson's correlation coefficient, one-sample t-test on monthly growth rates, Shapiro–Wilk test for normality and the independent-samples t-test. All tests use a 5% level of significance. The analysis was carried out in Python (NumPy and SciPy).

4.4 Data Note

NPCI's published average daily figures equal the monthly totals divided by the number of calendar days in each month. This was verified for all ten months. February 2026 has 28 days against 30 or 31 in other months, which affects raw monthly comparisons.

5. Data Analysis and Interpretation

UPI processed 2,05,046.07 million transactions (about 205 billion) worth ₹2,65,14,026.86 crore (about ₹265 lakh crore) in the ten months studied. Table 2 sets out the base data with the derived average ticket size.

5.1 Base Data

Table 2: Monthly UPI Transactions, June 2025 to March 2026

Month	Days	Volume (Mn)	Avg. daily volume (Mn)	Value (₹ Cr)	Avg. daily value (₹ Cr)	ATS (₹)
Jun 2025	30	18,395.01	613.17	24,03,930.69	80,131.02	1,306.84
Jul 2025	31	19,467.95	628.00	25,08,498.10	80,919.29	1,288.53
Aug 2025	31	20,008.31	645.43	24,85,472.90	80,176.55	1,242.22
Sep 2025	30	19,633.43	654.45	24,89,736.52	82,991.22	1,268.11

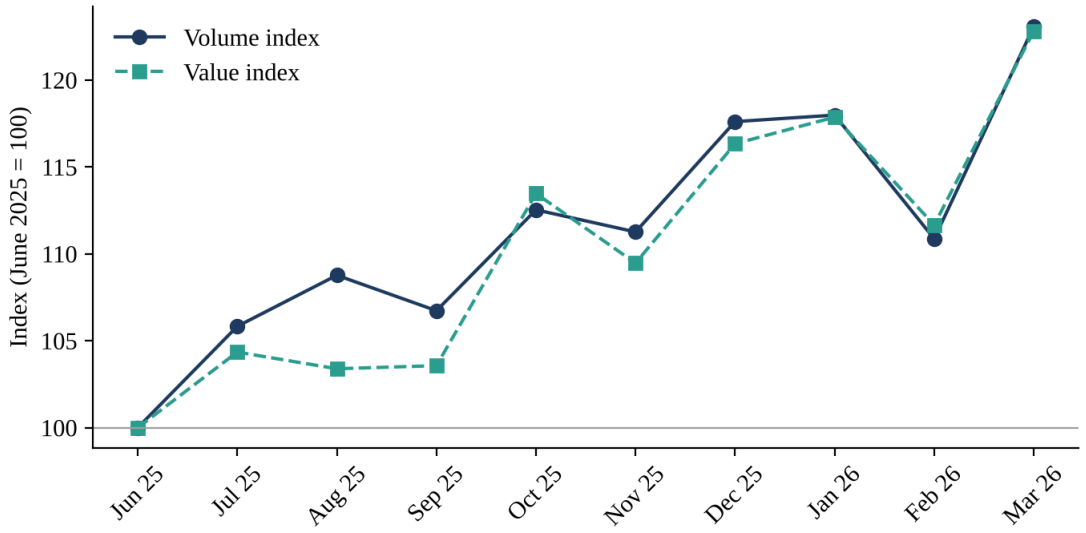
Month	Days	Volume (Mn)	Avg. daily volume (Mn)	Value (₹ Cr)	Avg. daily value (₹ Cr)	ATS (₹)
Oct 2025	31	20,700.92	667.77	27,27,790.71	87,993.25	1,317.71
Nov 2025	30	20,466.98	682.23	26,31,632.64	87,721.09	1,285.79
Dec 2025	31	21,634.67	697.89	27,96,712.71	90,216.54	1,292.70
Jan 2026	31	21,703.46	700.11	28,33,481.26	91,402.62	1,305.54
Feb 2026	28	20,394.20	728.36	26,84,229.30	95,865.33	1,316.17
Mar 2026	31	22,641.14	730.36	29,52,542.03	95,243.29	1,304.06

Source: NPCI, UPI Product Statistics. ATS computed by the author.

5.2 Overall Growth and Descriptive Statistics

Volume and value both grew by about 23% over the period, and they moved almost in step (Figure 1).

Figure 1: Index of UPI Volume and Value (June 2025 = 100)



Source: NPCI, UPI Product Statistics; index computed by the author.

Both indices dip together in February 2026, the only 28-day month, and recover to their highest level in March 2026.

Table 3: Descriptive Statistics and Growth (n = 10)

Variable	Mean	SD	CV (%)	Minimum	Maximum	Overall growth (%)	CMGR (%)
Volume (Mn)	20,504.61	1,241.04	6.05	18,395.01	22,641.14	23.08	2.33

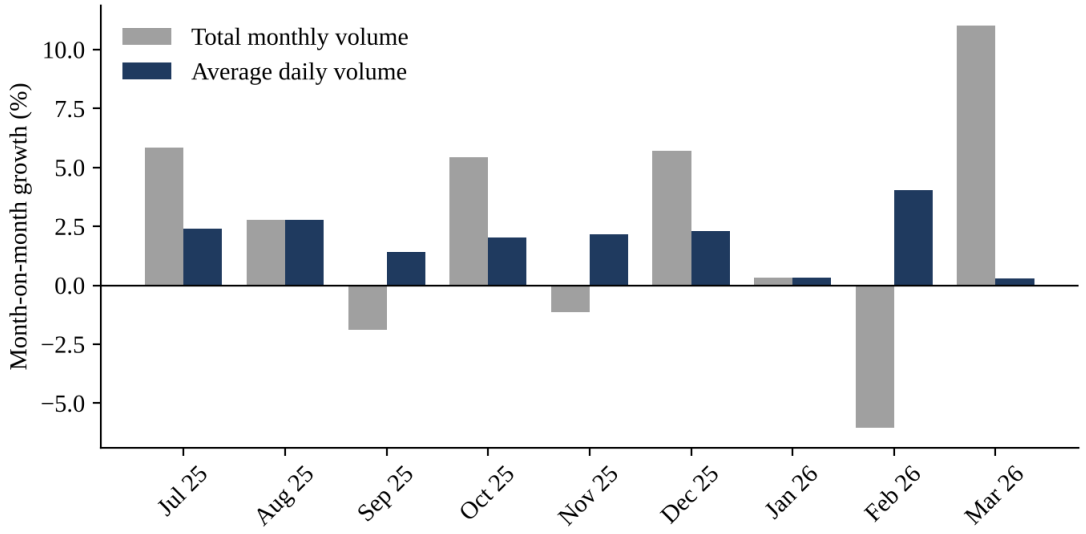
Variable	Mean	SD	CV (%)	Minimum	Maximum	Overall growth (%)	CMGR (%)
Avg. daily volume (Mn)	674.78	40.14	5.95	613.17	730.36	19.11	1.96
Value (₹ Cr)	26,51,402.69	1,78,757.70	6.74	24,03,930.69	29,52,542.03	22.82	2.31
Avg. daily value (₹ Cr)	87,266.02	5,998.72	6.87	80,131.02	95,865.33	18.86	1.94
ATS (₹)	1,292.77	23.31	1.80	1,242.22	1,317.71	−0.21	−0.02

The CMGR of 2.33% for volume compounds to about 31.9% a year, and the CMGR of 2.31% for value to about 31.5% a year. Volume and value vary by about 6–7% around their means, while ATS varies by only 1.8%.

5.3 Raw versus Day-adjusted Monthly Growth

Raw monthly growth is noisy because months differ in length. Volume fell 6.03% in February 2026 and then rose 11.02% in March, yet average daily volume rose in both months (Figure 2).

Figure 2: Month-on-month Growth in Total and Average Daily UPI Volume



Source: NPCI, UPI Product Statistics; growth rates computed by the author.

The grey bars move with the number of days in each month; the dark bars stay positive throughout, between 0.3% and 4.0%. A one-sample t-test on the nine monthly growth rates confirms this. Raw volume

growth averaged 2.45% (SD 5.15) and is not significantly different from zero (t = 1.43, p = 0.192). Day-adjusted volume growth averaged 1.97% (SD 1.18) and is significant (t = 4.99, p = 0.001). Day-adjusted value growth averaged 1.97% (SD 2.50; t = 2.36, p = 0.046). The Shapiro–Wilk test shows that raw volume growth rates are normally distributed (W = 0.973, p = 0.917), so the t-test is appropriate.

5.4 Trend Analysis

Table 4: Linear and Log-linear Trend Estimates (t = 1 to 10)

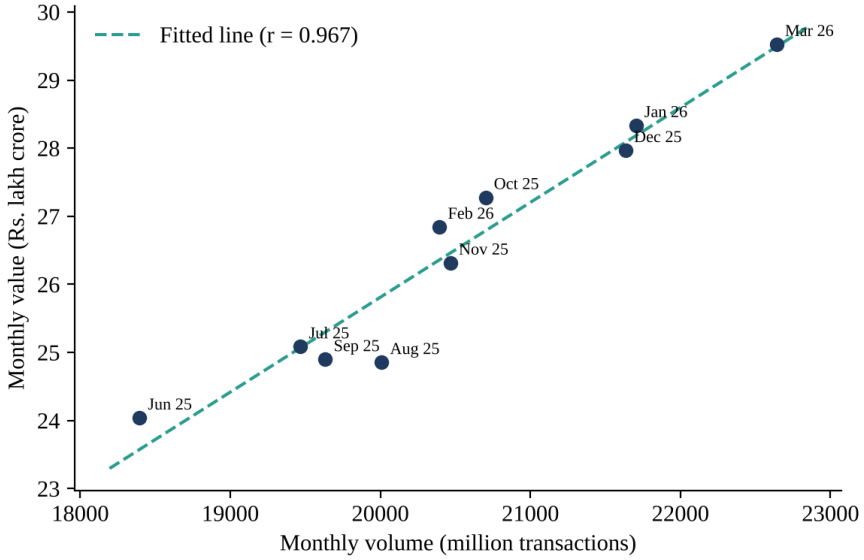
Variable	Linear slope (b) per month	t	p	R^2	Log-linear CGR (% per month)	R^2 (log-linear)
Volume	357.24 Mn	5.03	0.001	0.760	1.76	0.762
Avg. daily volume	13.19 Mn	26.90	< 0.001	0.989	1.98	0.988
Value	₹52,923.84 Cr	5.72	< 0.001	0.804	2.02	0.809
Avg. daily value	₹1,928.28 Cr	11.98	< 0.001	0.947	2.23	0.948
ATS	₹3.19	1.29	0.233	0.172	0.25	0.172

Volume grew by about 357 million transactions a month on trend, and value by about ₹52,924 crore a month. Both slopes are significant at 1%, so **H_{01} and H_{02} are rejected**. Day-adjusted series fit a straight line far better (R^2 of 0.989 and 0.947) than the raw series, which again shows that most of the month-to-month noise is a calendar effect.

5.5 Relationship between Volume and Value

Volume and value are very strongly and positively correlated (Pearson r = 0.967, p < 0.001); for the daily series r = 0.972 (p < 0.001). **H_{03} is rejected.**

Figure 3: Relationship between Monthly UPI Volume and Value



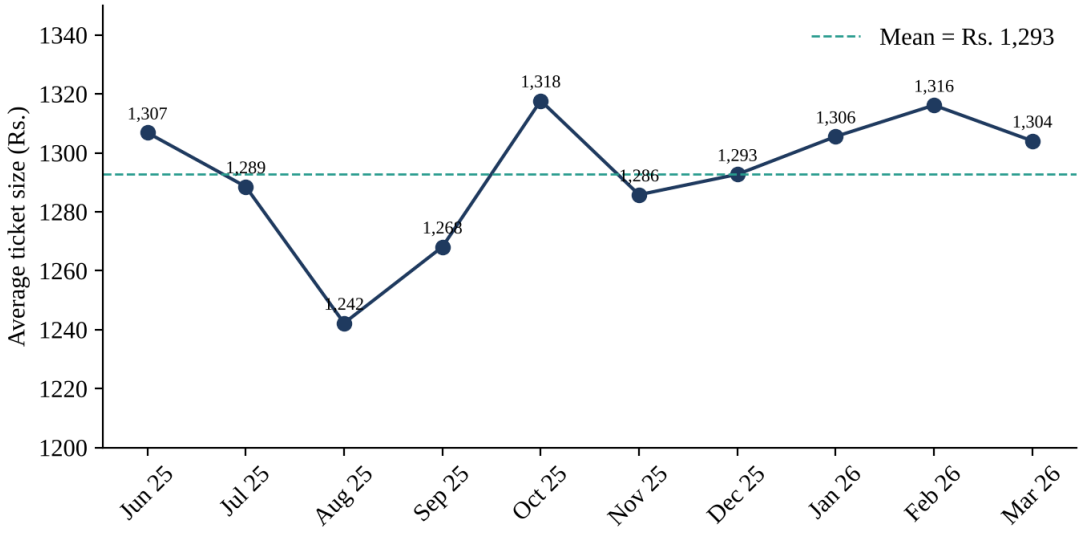
Source: NPCI, UPI Product Statistics; correlation and fitted line computed by the author.

All ten months lie close to the fitted line; even February 2026, a low month for both, sits close to it. The log-log model gives a value–volume elasticity of $\beta = 1.070$ (SE 0.103, $R^2 = 0.931$, $p < 0.001$). A test of $\beta = 1$ gives $t = 0.68$, so the elasticity is not significantly different from one. A 1% rise in the number of transactions is matched by a roughly 1% rise in value.

5.6 Average Ticket Size

ATS stayed within a narrow band of ₹1,242 to ₹1,318 and ended the period at ₹1,304, almost where it began (Figure 4).

Figure 4: Average Ticket Size of UPI Transactions



Source: NPCI, UPI Product Statistics; ATS computed by the author as value ÷ volume.

The trend in ATS is not significant (b = ₹3.19 a month, p = 0.233), so **H_{04} is not rejected**. The October 2025 high coincides with the Dussehra–Diwali festival season, when higher-value retail spending usually rises.

5.7 Quarterly and Half-period Comparison

Table 5: Quarterly UPI Performance, FY 2025–26

Quarter	Days	Volume (Mn)	Value (₹ Cr)	Avg. daily volume (Mn)	QoQ volume (%)	QoQ daily volume (%)	QoQ value (%)
Q2 (Jul–Sep 2025)	92	59,109.69	74,83,707.52	642.50	—	—	—
Q3 (Oct–Dec 2025)	92	62,802.57	81,56,136.06	682.64	6.25	6.25	8.98
Q4 (Jan–Mar 2026)	90	64,738.80	84,70,252.59	719.32	3.08	5.37	3.85

Q4 raw volume growth (3.08%) looks like a sharp slowdown from Q3 (6.25%). On a daily basis the slowdown is much milder (5.37% against 6.25%), because Q4 had two fewer days.

Table 6: Independent-samples t-test, First Half vs Second Half

Variable	Mean, Jun–Oct 2025	Mean, Nov 2025–Mar 2026	Change (%)	t	p	Decision
Volume (Mn)	19,641.12	21,368.09	8.79	3.05	0.016	Reject H_{05}
Value (₹ Cr)	25,23,085.78	27,79,719.59	10.17	3.27	0.011	Reject H_{05}
ATS (₹)	1,284.68	1,300.85	1.26	1.11	0.299	Not significant

The second half recorded significantly higher volume and value than the first half, while ATS did not change significantly.

5.8 Summary of Hypothesis Testing

Table 7: Results of Hypothesis Testing

Hypothesis	Test	Statistic	p	Result
H_{01}: No trend in volume	Linear regression	t = 5.03	0.001	Rejected

Hypothesis	Test	Statistic	p	Result
H_{02}: No trend in value	Linear regression	t = 5.72	< 0.001	Rejected
H_{03}: No volume–value correlation	Pearson correlation	r = 0.967	< 0.001	Rejected
H_{04}: No trend in ATS	Linear regression	t = 1.29	0.233	Not rejected
H_{05}: No difference between halves	Independent t-test	t = 3.05 (vol.), 3.27 (val.)	0.016, 0.011	Rejected

5.9 Illustrative Trend Projection

If the linear trend holds, monthly volume would reach about 22,469 million in April 2026, 22,827 million in May and 23,184 million in June 2026, with values of about ₹29.42, ₹29.95 and ₹30.48 lakh crore. These figures are illustrative only; a ten-month trend cannot capture seasonal or policy shocks.

6. Findings

- **Strong overall growth.** Monthly UPI volume rose 23.08% (from 18,395.01 million to 22,641.14 million) and value rose 22.82% (from ₹24.04 lakh crore to ₹29.53 lakh crore) in nine months. The CMGR of about 2.3% implies annualised growth of about 32%.
- **Significant upward trend.** Linear trends are significant for volume (+357 million a month, p = 0.001) and value (+₹52,924 crore a month, p < 0.001).
- **Calendar effects explain most monthly swings.** Average daily volume rose in all nine months, from 613.17 million to 730.36 million. Its trend explains 98.9% of its variation, against 76.0% for raw volume. The February 2026 fall and March 2026 rebound are mainly a 28-day-month effect.
- **Volume and value move together.** The correlation is 0.967 and the elasticity (1.07) is statistically equal to one, so value grows in proportion to the number of transactions.
- **Growth comes from more transactions, not larger ones.** ATS stayed stable at about ₹1,293 (CV 1.80%) with no significant trend, peaking in the October 2025 festival month.
- **Momentum continued into the second half.** Mean volume was 8.79% higher and mean value 10.17% higher in November 2025–March 2026 than in June–October 2025; both differences are significant.
- **Daily scale has crossed 730 million transactions.** At the March 2026 rate, UPI handles about ₹95,000 crore a day, and its daily volume of 730 million is 73% of the one-billion-a-day mark.

7. Suggestions and Policy Implications

- **Plan capacity on daily, not monthly, figures.** Daily volume is rising by about 13 million transactions every month. NPCI, banks and payment apps should size servers and failover systems on peak-day loads, especially for festival and month-end days.
- **Report day-adjusted growth.** NPCI and the media should present average daily figures alongside monthly totals, so that short months such as February are not read as a slowdown.

- **Protect the low-value, high-frequency base.** Since growth comes from many small payments of about ₹1,300 on average, the zero-MDR regime for small merchants and the UPI Lite wallet for small payments should be sustained and promoted.
- **Strengthen fraud prevention and grievance redressal.** Rising volume increases exposure to fraud and failed transactions. Real-time fraud alerts, faster reversals and the Online Dispute Resolution (ODR) system need matching investment.
- **Deepen inclusion in rural and semi-urban areas.** As Ghosh (2026) shows, the benefit of UPI is largest among excluded groups. Digital literacy drives, vernacular interfaces and feature-phone channels such as UPI 123PAY can widen the user base.
- **Encourage higher-value use cases.** Credit on UPI, RuPay credit card linkage and merchant EMI products can lift the average ticket size and support MSME credit.

8. Limitations and Scope for Further Research

8.1 Limitations

- The study covers only ten monthly observations (n = 10), which limits statistical power and rules out formal seasonal decomposition.
- It relies entirely on aggregate secondary data from NPCI and cannot separate P2P from P2M transactions, app-wise shares or state-wise patterns.
- ATS is an average and may hide opposite movements in small and large payments.
- The trend projection is illustrative and does not account for policy, technical or seasonal shocks.

8.2 Scope for Further Research

- Extending the series to several financial years would allow seasonal decomposition and ARIMA or exponential-smoothing forecasts.
- Comparing the projection in Section 5.9 with NPCI's actual figures for April–June 2026 would test its accuracy out of sample.
- P2P versus P2M analysis, app-wise market concentration, and state- or district-level studies, including for the Mysore Revenue Division, would add depth.
- Primary studies could link UPI usage by micro enterprises to their sales, working capital and access to credit.

9. Conclusion

UPI grew strongly and steadily between June 2025 and March 2026. Monthly volume rose 23% to 22.64 billion transactions and value rose 23% to ₹29.53 lakh crore, both with significant upward trends. Once the number of days in each month is accounted for, growth was positive in every month, at about 2% a month.

The central finding is that this growth is driven by the number of transactions, not their size. Volume and value moved almost one-for-one, and the average ticket size held steady at about ₹1,293. UPI is therefore deepening as the default channel for every day, small-value payments across India.

Sustaining this path will require investment in system capacity, fraud prevention and digital inclusion. Policymakers and researchers should also read UPI data on a day-adjusted basis, so that calendar effects are not mistaken for changes in momentum.

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