

Comparative Analysis of Customer Perception Toward E-Banking in Indian Banks

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Abstract: This paper aims at analyzing the perception of Electronic Banking Services (E-Banking) of customers in public banks and private banks in India with the help of secondary data of two representative banks, SBI and HDFC Bank, respectively. The study does not depend on a primary survey on the customers instead it collates and visualises data published by an RBI, NPCI, NFHS-5, and World Bank's Global Findex database and interprets the trends using SERVQUAL and TAM/UTAUT literature in Indian banking. The analysis provides insights into the growth of transaction value and transaction volume by month for all UPI transactions and bank-wise growth of UPI ecosystem for FY25-26, expansion in number of banks live on UPI, comparative analysis of UPI chargeback incidence, UPI chargeback ratio and UPI dispute-acceptance rate of SBI, HDFC Bank for May 2025 and May 2026 in graphical and tabular form. Results show continued expansion in UPI value, volume, and bank participation, alongside diverging year-on-year chargeback trajectories: SBI recorded a fall in both chargebacks received and its chargeback ratio despite a double-digit rise in transaction volume, while HDFC Bank recorded a rise in chargebacks received and its chargeback ratio despite a contraction in transaction volume; both banks recorded a fall in the share of disputes resolved in the customer's favour. National-level financial-inclusion data further reveal persistent gender and digital-literacy gaps that bear on customer perception independent of bank ownership type. The paper situates these statistical patterns within the SERVQUAL and UTAUT literature, draws implications for grievance-redress design and digital-literacy policy, and It proposes a primary-survey research agenda, which is based in the SBI-HDFC-Kanpur context, to validate the inferences offered here, and introduces a digital-literacy policy.

Keywords: E-banking; Customer Perception; Public Sector Banks; Private Sector Banks; SERVQUAL; UTAUT; UPI; Digital Financial Inclusion; India

1. Introduction

In the last ten years, India's banking industry has shifted from a branch-based service delivery model to a digitally mediated service delivery model, which is largely dependent on internet banking, Mobile banking, and the Unified Payments Interface (UPI). The combination of the demonetisation exercise in November 2016, a boom in smartphone penetration and low-cost data access, and the regulatory mandate for a less-cash economy has all helped spur this change (Kesharwani & Bisht, 2012; Kumar et al., 2023). In this new environment, public sector banks (PSBs), including the State Bank of India (SBI), and private sector banks (PSBs) have structurally different positions – PSBs have a legacy of having a large branch network and a quasi-sovereign trust premium, but they have been slower to refresh technology compared to private sector banks, which have generally been investing in digital channels earlier and more aggressively than PSBs while often sacrificing deep rural penetration.

Customer perception of e-banking services - encompassing trust, perceived ease of use, security, responsiveness, and satisfaction with grievance redress - has therefore become a central research theme in Indian banking scholarship, typically examined through the SERVQUAL service-quality framework (Parasuraman et al., 1988) or technology-adoption frameworks such as the Technology Acceptance Model (TAM; Davis, 1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT; Venkatesh et al., 2003). The substantial majority of this literature is primary-survey based, drawing on structured questionnaires administered to a few hundred



respondents in a specific city or region, and comparing a small number of public- and private-sector bank pairs (Ali & Bisht, 2018; Kesharwani & Bisht, 2012).

This paper takes a complementary approach. Rather than collecting new primary data, it draws on secondary, institutionally published transaction, dispute, and demographic statistics - issued by the RBI, the NPCI, the World Bank, and the Government of India - to construct an evidence-based macro context for customer-perception research focused on SBI and HDFC Bank, with particular relevance to a North Indian, Tier-II market such as Kanpur, Uttar Pradesh. The objective is not to test perception hypotheses directly, since that requires primary survey data that lies outside the scope of this paper, but to establish, from verifiable national datasets, the transaction-growth, dispute-resolution, and financial-inclusion backdrop against which customer perception in this segment can be meaningfully interpreted, and to identify where the secondary evidence aligns with, or complicates, the existing SERVQUAL/UTAUT literature on Indian e-banking.

2. Literature Review

2.1 Service Quality and Customer Satisfaction in Public versus Private Sector Banks

The SERVQUAL model, comprising the five dimensions of tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman et al., 1988), remains the dominant framework for comparing customer perceptions of public- and private-sector banks in India. Ali and Bisht (2018) have done SERVQUAL on various Indian public and private banks, and the results showed that customers of the private banks were always more satisfied across all dimensions, while the perception-expectation gap for assurance was found to be negative for public-sector banks; that is, the perception of competence and security was lower than the expectation of customers for these banks. The pattern is confirmed by the subsequent comparative studies in this stream based on the SERVQUAL model which show that private banks have the comparative advantage in responsiveness, tangibles, and empathy, due to their better technology infrastructure and more customer oriented service culture, while public banks have the comparative advantage in reliability and trust, especially with the rural and older customer groups. This score for public banks is consistent with their state-backed nature, and long operating history, despite their less favorable ratings on the more experiential dimensions of SERVQUAL.

2.2 Technology Adoption and Customer Perception in Indian E-Banking

Another strand of literature explores the adoption of e-banking from a technology-acceptance perspective. Kesharwani and Bisht (2012) extended the Technology Acceptance Model for the Indian internet-banking context by incorporating perceived risk and website design as antecedents, finding that perceived risk negatively affects behavioural intention to adopt internet banking, and that trust reduces perceived risk - a finding with direct implications for how customers across both PSBs and private banks form perceptions of digital-channel reliability. Building on the Unified Theory of Acceptance and Use of Technology, Kumar et al. (2023) found that performance expectancy, effort expectancy, social influence, and perceived financial cost significantly shape young Indian users' behavioural intention toward mobile banking, with perceived trust positively influencing actual use. Across this literature, perceived risk and institutional trust consistently emerge as the constructs most directly tied to customer perception of e-banking safety and reliability - constructs that, this paper argues, can be partially proxied at the macro level by published dispute and chargeback statistics, even in the absence of primary survey data.

2.3 Security, Fraud, and Grievance Redress in Digital Payments

Customer perception of e-banking is also shaped by the lived experience of transaction failure, fraud, and dispute resolution. Government data presented in the Lok Sabha indicate that UPI-related fraud cases rose from approximately 7.25 lakh cases involving ₹573 crore in FY 2022-23 to 13.42 lakh cases involving ₹1,087 crore in FY 2023-24, even as UPI transaction volumes expanded from roughly 92 crore transactions in 2017-18 to over 13,116 crore transactions in 2023-24 (Business Today, 2026). Commentary accompanying this data highlights a structural mismatch between the near-instantaneous settlement of UPI transactions and the comparatively slow pace of dispute

resolution and legal recourse, particularly in cases involving cross-state fraud or so-called 'mule' accounts (Business Today, 2026). NPCI's UPI Dispute Redressal Mechanism is designed to address this gap by allowing customers to raise complaints for failed transactions, incorrect transfers, or suspected fraud, with escalation to NPCI where the remitting or beneficiary bank does not resolve the complaint - yet the visibility, accessibility, and outcome consistency of this mechanism across different banks remains comparatively under-examined in the customer-perception literature relative to adoption-stage constructs such as ease of use and usefulness.

2.4 Financial Inclusion and Demographic Determinants of E-Banking Perception

Customer-perception research on Indian e-banking has also tended to under-weight macro-level demographic determinants of access and confidence. The World Bank's Global Findex Database 2025 reports that account ownership in India has reached 89 percent of adults since the survey series began in 2011, with a corresponding rise in the share of adults holding active accounts (Klapper et al., 2025; Press Information Bureau, 2025). However, analysis of the same dataset finds statistically significant gender gaps in India in access to digitally enabled accounts, in usage of digital financial services, and in self-reported financial well-being - gaps that persist even after controlling for socio-economic characteristics such as education, income, and employment status (Dvara Research, 2026). Globally, the 2025 Findex round also finds that a substantial share of adults without a financial account, between roughly a third and three-fifths across regions, say they would need assistance to use a formal account if they opened one, with women in South Asia at least 19 percentage points more likely than men to report this need (World Bank, 2025). The National Family Health Survey (NFHS-5, 2019-21) corroborates this pattern at the sub-national level, finding that while mobile-phone ownership among women has risen across Indian states, a meaningful proportion of women in several states do not yet own or personally use a mobile phone, and that men's internet usage exceeds women's by a wide margin in a number of states (International Institute for Population Sciences & Ministry of Health and Family Welfare, 2021). These demographic gaps are directly relevant to any customer-perception study situated in a North Indian district such as Kanpur, since perception of e-banking ease-of-use and trust is unlikely to be demographically uniform.

2.5 Research Gap

Three gaps emerge from this review. First, the SERVQUAL- and TAM/UTAUT-based literature on Indian e-banking perception is almost entirely primary-survey based, drawing on convenience samples in single cities, and rarely triangulates its findings against publicly available, institution-level transaction and dispute data. Second, while fraud and dispute-resolution statistics are tracked at the national level by the RBI and NPCI, and customer-perception studies separately track trust and perceived risk through structured instruments, the two streams are seldom brought into direct comparison for specific, named bank pairs such as SBI and HDFC Bank. Third, demographic determinants of digital-banking access, as captured in the Global Findex and NFHS datasets, are rarely integrated into bank-specific perception research, despite their evident relevance to customer segments in Tier-II and Tier-III markets such as Kanpur. This paper addresses these gaps by assembling and interpreting the relevant secondary datasets for the SBI-HDFC pair, while explicitly flagging that primary survey validation remains necessary to draw direct conclusions about individual customer perception.

3. Objectives of the Study

1. To review the SERVQUAL- and TAM/UTAUT-based literature on customer perception of e-banking services across public- and private-sector banks in India.
2. To analyse secondary, NPCI-published UPI transaction-volume and bank-participation trends in India between April 2025 and June 2026.
3. To comparatively examine bank-wise UPI chargeback volumes, chargeback ratios, and dispute-acceptance rates for the State Bank of India and HDFC Bank for May 2025 and May 2026.

4. To situate these institution-level patterns within national-level financial-inclusion and demographic indicators relevant to North Indian states such as Uttar Pradesh.
5. To derive perception-relevant inferences from the secondary evidence and to outline a primary-research agenda capable of validating these inferences for a Kanpur-based customer sample.

4. Research Methodology

This study adopts a descriptive-analytical research design based entirely on secondary data; it does not involve primary data collection from bank customers and should accordingly be read as an evidence-synthesis and contextual-analysis paper rather than a hypothesis-testing study of individual customer attitudes. Four categories of secondary sources were used. First, peer-reviewed and Scopus/Web-of-Science-indexed literature on SERVQUAL, TAM, and UTAUT applications to Indian banking was reviewed to establish the theoretical and empirical baseline (Section 2). Second, institutional transaction and dispute-resolution data were drawn from the National Payments Corporation of India, comprising: (a) UPI Product Statistics for FY 2025-26 (April 2025-March 2026) and the first two months of FY 2026-27 (April-May 2026); (b) daily UPI statistics for June 2026; and (c) bank-wise UPI Ecosystem (Chargeback) Statistics for May 2025 and May 2026, covering total transactions, chargeback ratio, chargebacks received, chargebacks accepted, and re-presentments raised for each beneficiary bank. Third, macro-level financial-inclusion and demographic data were drawn from the Reserve Bank of India's Database on Indian Economy, the World Bank's Global Findex Database 2025, and the National Family Health Survey (NFHS-5, 2019-21). Fourth, recent secondary commentary on UPI fraud trends was drawn from government data tabled in the Lok Sabha and reported in the financial press.

SBI and HDFC Bank were selected as the representative public- and private-sector pair on the basis of scale and comparability with prior literature: SBI is India's largest public-sector bank by branch network and, in the chargeback dataset used here, the largest single beneficiary bank by UPI transaction volume; HDFC Bank is India's largest private-sector bank by market capitalisation and ranks among the top beneficiary banks by UPI volume. This single-pair design mirrors the approach used in prior SERVQUAL-based comparative studies of Indian banking (Ali & Bisht, 2018), and allows the chargeback analysis in Section 5.2 to be read against that literature's findings.

The analytical technique applied to the NPCI data is descriptive trend, graphical, and percentage-change analysis: month-on-month and year-on-year changes in transaction value, transaction volume, number of banks live on UPI, chargebacks received, chargebacks accepted, and chargeback ratio were computed directly from the published figures and presented as bar and line charts (Figures 1-6), without modelling or inferential statistical testing, since the data are population-level institutional statistics rather than a sample requiring inference. The NPCI portal has published a monthly transaction-value chart that is reproduced in figure 1; the remaining figures were created by the author from the same underlying NPCI dataset. The literature review, which was also conducted in a structured manner, used the following keywords: e-banking customer perception India; SERVQUAL public private bank India; UTAUT mobile banking India; UPI fraud dispute redressal India, which were limited to studies that focused on the Indian banking environment.

5. Data Analysis and Discussion

5.1 Growth Trends in India's UPI Ecosystem (April 2025-June 2026)

Figure 1 reproduces NPCI's officially published monthly UPI transaction-value chart for the financial year 2025-26. The value of UPI transactions rose broadly across the year, from ₹23,94,925.87 crore in April 2025 to ₹29,52,542.05 crore in March 2026, with January 2026 recording ₹28,33,481.22 crore. Consistent with NPCI's published methodology, these figures exclude transactions involving a debit and credit to the same account from August 2018 onwards.

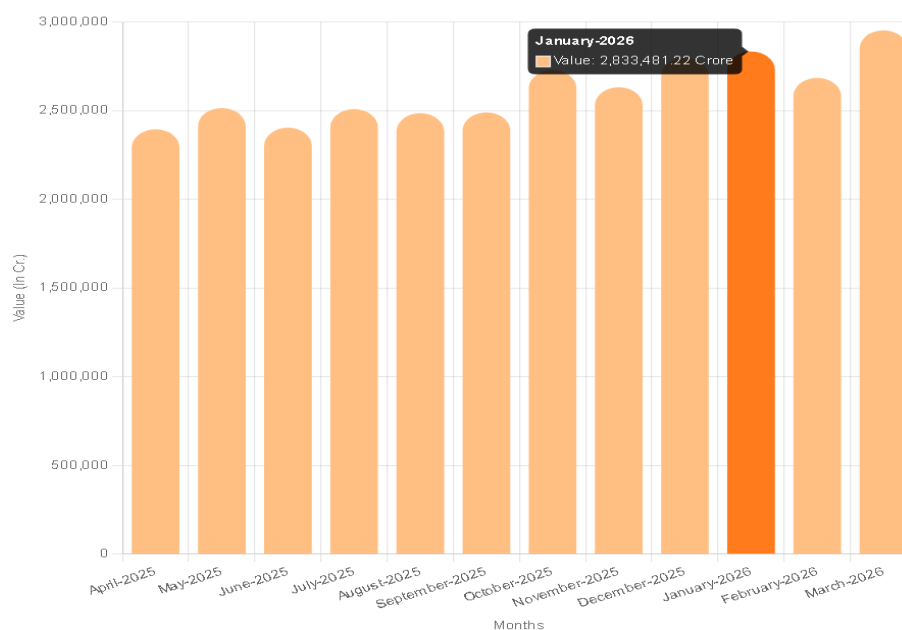


Figure 1. Monthly UPI transaction value (₹ Crore), FY 2025-26. Source: NPCI, UPI Product Statistics (<https://www.npci.org.in/product/upi/product-statistics>).

Table 1 summarises NPCI's published UPI Product Statistics for selected months between April 2025 and May 2026. The number of banks live on UPI rose from 668 in April 2025 to 705 by March 2026, a net addition of 37 banks within FY 2025-26, and further to 720 by May 2026, an increase of 52 banks (7.8 percent) over the fourteen-month period. Monthly transaction volume rose from 17,893.42 million in April 2025 to 22,641.11 million in March 2026, a growth of 26.5 percent within the financial year, before reaching 23,201.93 million in May 2026. The transaction value has also shown a similar trend, increasing from ₹23,94,925.87 crore in April 2025 to ₹29,52,542.05 crore in March 2026.

Period	Banks Live on UPI	Volume (Mn.)	Value (₹ Cr.)	MoM/YoY Note
April 2025	668	17,893.42	23,94,925.87	FY 2025-26 start
March 2026	705	22,641.11	29,52,542.05	+26.5% volume vs Apr-25
April 2026	713	22,346.80	29,02,988.05*	FY 2026-27 start
May 2026	720	23,201.93	29,90,424.21	+52 banks vs Apr-25

Source: NPCI, UPI Product Statistics (Monthly), FY 2025-26 and FY 2026-27.

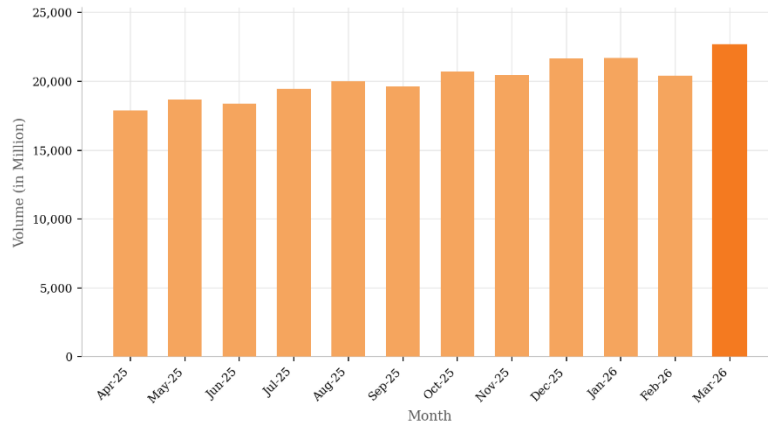


Figure 2. Monthly UPI transaction volume (in million), FY 2025-26. Constructed by the author from NPCI UPI Product Statistics. March 2026 highlighted.

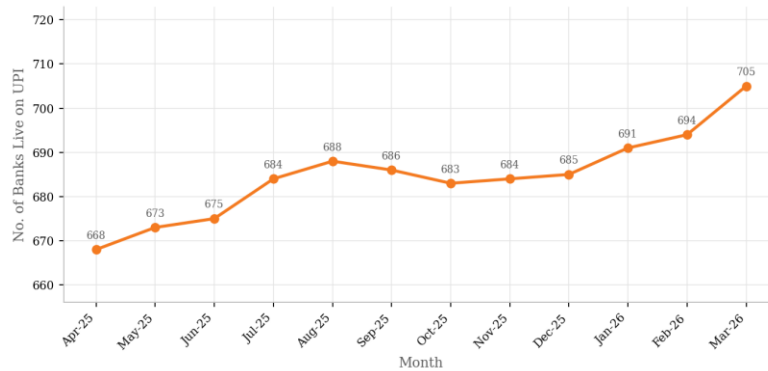


Figure 3. Number of banks live on UPI, FY 2025-26. Constructed by the author from NPCI UPI Product Statistics.

Figures 2 and 3 visualise the volume and bank-participation trends underlying Table 1. Both display a broadly upward trajectory across the financial year, with transaction volume peaking in March 2026 and the number of participating banks rising in a near-monotonic fashion from 668 to 705 over the same window. NPCI's daily statistics for June 1-16, 2026 show transaction volume holding within a comparatively narrow band of 760-796 million transactions per day, while daily transaction value declined from ₹1,26,017.27 crore on 1 June to ₹76,045.15 crore on 14 June before recovering to ₹1,00,667.03 crore by 16 June, a pattern broadly consistent with month-start salary and bill-payment cycles tapering through the middle of the month. Taken together, these trends indicate that the structural growth in UPI participation, both in the number of participating banks and in transaction volume, continued through the period under review, consistent with the adoption-stage findings of the UTAUT literature, in which performance expectancy and social influence continue to drive new and incremental usage (Kumar et al., 2023).

5.2 Comparative Chargeback and Dispute-Resolution Analysis: SBI and HDFC Bank

Table 2 presents NPCI's bank-wise UPI Ecosystem (Chargeback) Statistics for SBI and HDFC Bank for May 2025 and May 2026. The two banks display markedly different year-on-year trajectories.

Bank	Period	Total UPI Txns	CB Ratio	CB Received	CB Accepted	Acceptance Rate*	Representments
SBI	May 2025	1,968,448,634	0.000%	9,235	7,412	80.26%	1,823

SBI	May 2026	2,219,906,275	0.000%	5,878	1,385	23.56%	4,493
HDFC Bank	May 2025	868,678,420	0.002%	13,686	7,324	53.51%	6,362
HDFC Bank	May 2026	711,283,792	0.002%	16,052	6,942	43.25%	9,110

Source: NPCI, UPI Ecosystem Statistics - Chargeback, May 2025 and May 2026. *Acceptance Rate is computed as $\text{Chargebacks Accepted} \div \text{Chargebacks Received} \times 100$, calculated from the published figures; it is not a figure independently published by NPCI.

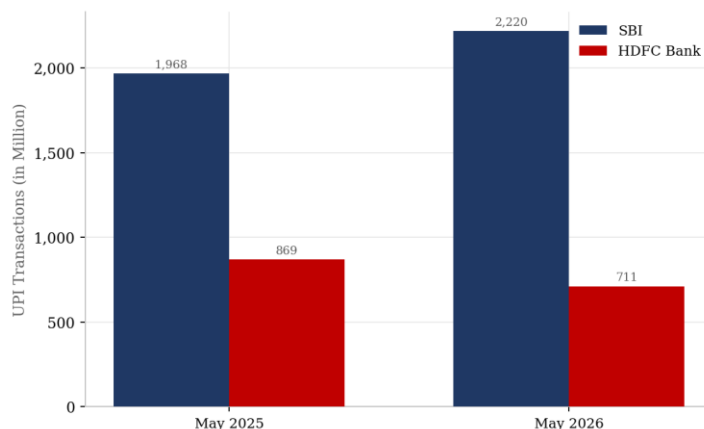


Figure 4. UPI transaction volume (in million), SBI vs HDFC Bank, May 2025 vs May 2026. Constructed by the author from NPCI UPI Ecosystem (Chargeback) Statistics.

SBI's total UPI transaction volume rose by 12.8 percent between May 2025 and May 2026 (from 1.97 billion to 2.22 billion transactions), while chargebacks received fell by 36.4 percent over the same period (from 9,235 to 5,878), and its chargeback ratio nearly halved in relative terms (from approximately 0.00047 percent to 0.00026 percent of transactions). On its face, this suggests an improvement in transaction reliability or dispute incidence at India's largest public-sector bank even as volume scaled up. However, the proportion of received chargebacks that SBI accepted, that is, resolved in the customer's favour, fell sharply, from 80.3 percent in May 2025 to 23.6 percent in May 2026. Read together, the fall in disputes received alongside a steep fall in the acceptance rate is ambiguous: it may reflect tighter upstream fraud and error screening that reduces the number of disputes reaching chargeback status, a stricter chargeback-acceptance policy, or a shift in the composition of disputes toward categories less likely to be accepted. Any of these interpretations is directly relevant to customer perception of grievance redress, since acceptance rate maps closely onto the responsiveness and assurance dimensions of the SERVQUAL framework (Parasuraman et al., 1988).

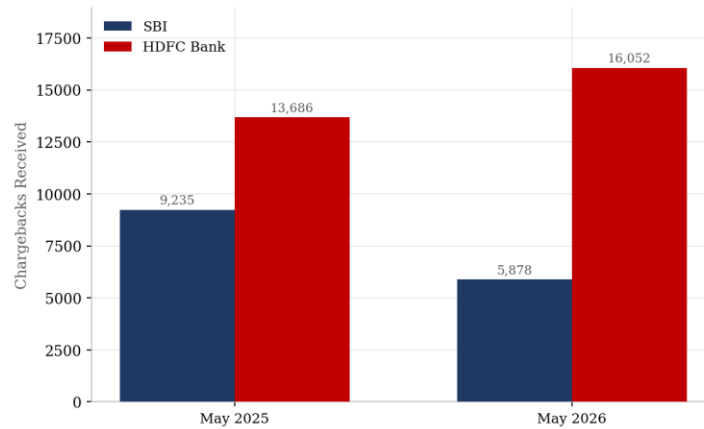


Figure 5. UPI chargebacks received, SBI vs HDFC Bank, May 2025 vs May 2026. Constructed by the author from NPCI UPI Ecosystem (Chargeback) Statistics.

HDFC Bank shows the inverse pattern. Total UPI transaction volume attributed to HDFC Bank fell by 18.1 percent over the same period (from 869 million to 711 million transactions), while chargebacks received rose by 17.3 percent (from 13,686 to 16,052), and its chargeback ratio rose from approximately 0.00158 percent to 0.00226 percent of transactions, a relative increase of roughly 43 percent. HDFC Bank's acceptance rate also declined, though less sharply than SBI's, from 53.5 percent to 43.3 percent. This combination, a contracting transaction base alongside a rising incidence of disputes per transaction, runs counter to the general expectation in the SERVQUAL literature that private-sector banks outperform public-sector banks on responsiveness and tangibles (Ali & Bisht, 2018); it suggests that channel-specific dispute data for UPI may not move in lockstep with the broader service-quality advantages private banks have historically demonstrated in survey-based studies, and that perception research should treat digital-payment dispute experience as a distinct sub-construct rather than assuming it tracks overall service-quality ratings.

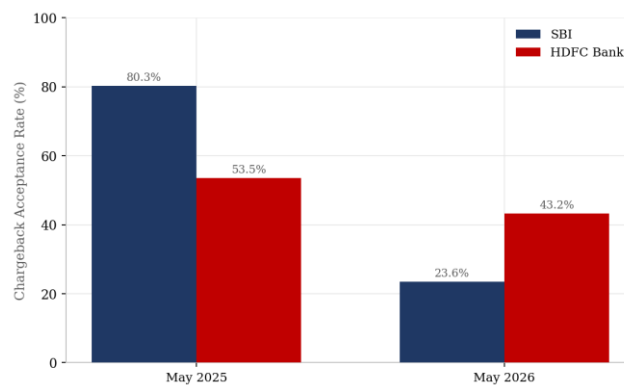


Figure 6. Chargeback acceptance rate (%), SBI vs HDFC Bank, May 2025 vs May 2026. Acceptance rate = chargebacks accepted ÷ chargebacks received. Constructed by the author from NPCI data.

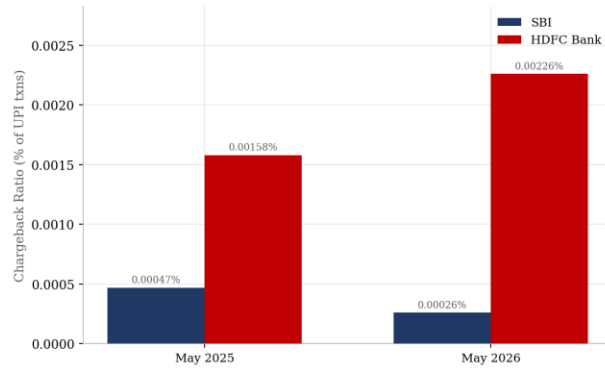


Figure 7. UPI chargeback ratio (% of transactions), SBI vs HDFC Bank, May 2025 vs May 2026. Constructed by the author from NPCI data.

Figures 6 and 7 make the divergence visually explicit. In Figure 6, the two banks effectively switch relative positions: SBI moves from the higher acceptance rate in May 2025 to the lower in May 2026, while in Figure 7 SBI's chargeback ratio falls below HDFC Bank's, which rises. It is important to note that both banks operate at dispute-incidence levels far below one-hundredth of one percent of transactions, which is consistent with UPI's overall reliability at the national level. The comparative value of Table 2 and Figures 4-7 lies not in the absolute magnitude of disputes, which is small for both institutions, but in the directionality of year-on-year change, which diverges meaningfully between the public- and private-sector bank in this pair.

5.3 Macro-Level Financial Inclusion and Demographic Context

The institution-level patterns in Sections 5.1 and 5.2 sit within a broader financial-inclusion context that is directly relevant to customer perception in a North Indian market such as Kanpur. The Global Findex Database 2025 reports that account ownership in India has reached 89 percent of adults, with continued growth in the share of accounts classified as active (Klapper et al., 2025; Press Information Bureau, 2025). At the same time, Dvara Research's (2026) analysis of the same dataset finds statistically significant gender gaps in India in access to digitally enabled accounts and in usage of digital financial services that persist after controlling for socio-economic factors, while the World Bank (2025) finds that a substantial share of adults without an account would need assistance to use one if they opened it, with women in South Asia disproportionately likely to report this need. NFHS-5 data corroborate this pattern at the state level, with continuing gaps between men's and women's mobile-phone ownership and internet use in several states (International Institute for Population Sciences & Ministry of Health and Family Welfare, 2021).

These demographic gaps interact with the fraud and dispute trends discussed in Section 2.3. Lok Sabha data show UPI-related fraud cases nearly doubling in value terms between FY 2022-23 and FY 2023-24 (Business Today, 2026), even as the dispute-resolution mechanism available to affected customers remains, by legal and consumer-advocate accounts, structurally slower than the transactions it is meant to address (Business Today, 2026). For a customer segment with lower baseline digital confidence, of the kind the Global Findex and NFHS data document as more prevalent among women and less-educated users, the combination of rising fraud exposure and an uneven or unfamiliar grievance-redress pathway is likely to weigh more heavily on perceived risk and trust than it would for a digitally confident urban customer. This reinforces the relevance of demographic stratification, by gender, age, education, and rural/urban residence, for any primary perception survey conducted on the SBI-HDFC, Kanpur sample that this paper's findings are intended to inform.

6. Key Findings

1. UPI participation continued to widen and deepen between April 2025 and May 2026: the number of banks live on UPI rose by 52 (7.8 percent), and monthly transaction volume rose by approximately 29.7 percent over the same fourteen-month window.

2. SBI's UPI transaction volume grew 12.8 percent year-on-year (May 2025-May 2026) while its chargebacks received fell 36.4 percent and its chargeback ratio nearly halved, indicating an improving dispute-incidence trend at the public-sector bank in this pair.
3. SBI's chargeback acceptance rate fell sharply, from 80.3 percent to 23.6 percent, indicating that a much smaller share of disputes raised against SBI in May 2026 were resolved in the customer's favour than in May 2025.
4. HDFC Bank's UPI transaction volume fell 18.1 percent year-on-year while its chargebacks received rose 17.3 percent and its chargeback ratio rose by roughly 43 percent in relative terms, a worsening dispute-incidence trend at the private-sector bank in this pair.
5. National fraud data show UPI-related fraud cases and value nearly doubling between FY 2022-23 and FY 2023-24, against a backdrop of dispute-resolution timelines that consumer-law commentary characterises as structurally slower than UPI's near-instant settlement.
6. National financial-inclusion data (Global Findex 2025; NFHS-5) document persistent gender and digital-confidence gaps in India that are independent of, and additive to, the bank-specific patterns identified above, and that are likely to be relevant in a Kanpur-based customer sample.

7. Discussion

The secondary evidence assembled in this paper offers a mixed picture relative to the SERVQUAL and TAM/UTAUT literature reviewed in Section 2. On one hand, the literature's consistent finding that public-sector banks retain a trust and reliability advantage (Ali & Bisht, 2018) finds some support in SBI's improving chargeback ratio and falling dispute volume even as its UPI transaction base expanded. On the other hand, the same literature's finding that private-sector banks generally outperform public-sector banks on responsiveness and service tangibles is complicated by HDFC Bank's rising chargeback ratio and falling acceptance rate over the same window, in a channel (UPI) where responsiveness to a failed or disputed transaction is precisely the dimension being tested. This divergence suggests that channel-specific performance, particularly in fast-settlement digital-payment rails, may not be a reliable proxy for a bank's overall SERVQUAL standing, and that perception researchers should treat UPI-specific trust and risk as a distinct construct, consistent with the perceived-risk emphasis of the TAM/UTAUT literature (Kesharwani & Bisht, 2012; Kumar et al., 2023).

The fall in SBI's chargeback acceptance rate, in particular, is a finding that primary perception research on this bank pair should investigate directly, since acceptance rate is a closer behavioural proxy for the lived experience of grievance redress than aggregate satisfaction scores typically capture. If a Kanpur-based customer survey finds that SBI customers report lower satisfaction with dispute outcomes in 2026 than in 2025, the chargeback-acceptance trend identified here would offer a plausible, externally verifiable explanation; if no such decline is reported, that would itself be a noteworthy finding suggesting that institutional acceptance-rate data and customer-reported satisfaction do not move together, an important methodological insight for future SERVQUAL-based research design in the Indian digital-banking context.

8. Implications

8.1 Theoretical Implications

This paper suggests that SERVQUAL- and UTAUT-based perception research on Indian e-banking can be strengthened by triangulating primary survey constructs against publicly available, institution-level transaction and dispute data. Acceptance rate, chargeback ratio, and transaction-volume growth, as computed in Section 5.2, offer externally verifiable, non-self-reported proxies for the responsiveness, assurance, and perceived-risk constructs that the existing literature measures almost exclusively through self-report instruments.

8.2 Managerial Implications

For HDFC Bank and similarly placed private-sector institutions, the rising chargeback ratio identified in Section 5.2 suggests a need to examine dispute-resolution capacity and root-cause categories even where overall digital adoption metrics remain strong. For SBI and similarly placed public-sector institutions, the steep fall in acceptance rate warrants internal review to determine whether it reflects improved fraud screening upstream, a tightening of acceptance criteria, or a shift in dispute composition, since each has different implications for customer communication and grievance-redress messaging.

8.3 Policy Implications

The national-level fraud trend documented in Section 2.3, alongside the persistent demographic gaps in digital confidence documented in Section 5.3, supports continued regulatory attention to standardising UPI dispute-redressal timelines across participating banks and to targeted digital-literacy interventions for the demographic segments, particularly women and less-educated rural and semi-urban customers, that the Global Findex and NFHS data identify as having lower baseline digital-financial confidence.

9. Limitations of the Study

This paper's central limitation is that it is based entirely on secondary, institution-level and national-level data and does not include a primary survey of individual SBI or HDFC Bank customers; its findings should therefore be read as contextual and exploratory rather than as direct evidence of customer attitudes, satisfaction, or perception. The chargeback comparison in Section 5.2 covers only a single calendar month (May) in each of two years, which limits its ability to capture seasonal variation across the full financial year. The SBI-HDFC pairing, while consistent with prior single-pair SERVQUAL studies, captures only one public-sector and one private-sector institution and cannot be generalised to the full heterogeneity of either banking segment. Finally, several NPCI-published figures used in Table 1 contain minor formatting inconsistencies in the source files (noted in the table footnote), which should be re-verified against the live NPCI portal before the figures are relied upon for final submission.

10. Conclusion and Scope for Future Research

This paper has assembled and interpreted secondary, publicly available transaction, dispute, and demographic data to construct an evidence-based context for customer perception of e-banking services across public- and private-sector banks in India, using SBI and HDFC Bank as the representative pair. The analysis finds continued structural growth in UPI participation, a diverging year-on-year chargeback trajectory between the two banks, and persistent national-level demographic gaps in digital-financial confidence that are likely to interact with bank-specific patterns in a North Indian market such as Kanpur. The findings both support and complicate aspects of the existing SERVQUAL and TAM/UTAUT literature on Indian e-banking, particularly regarding the assumption that private-sector banks uniformly outperform public-sector banks on responsiveness in the digital-payment channel specifically.

The principal direction for future research is the primary survey that this paper does not itself undertake: a structured SERVQUAL- and UTAUT-informed questionnaire administered to SBI and HDFC Bank customers in Kanpur, stratified by gender, age, education, and rural/urban residence consistent with the demographic determinants identified in Section 5.3, and designed explicitly to test whether the institution-level chargeback and acceptance-rate trends identified here (Section 5.2) are reflected in customers' self-reported trust, perceived risk, and satisfaction with grievance redress. Such a survey would allow the secondary-data inferences offered in this paper to be validated, qualified, or revised against direct customer evidence.

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