

# Customer Satisfaction in Digital Banking: Trends and Research Gaps A Systematic Review of the Indian Banking Context (2010–2024)

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## Abstract

The rapid digitalisation of banking services in India — catalysed by the Unified Payments Interface (UPI), Jan Dhan Yojana, demonetisation (2016), and the COVID-19-driven behavioural shift — has fundamentally altered the landscape of customer experience and satisfaction. This paper presents a systematic literature review (SLR) of 85 Scopus-indexed and peer-reviewed studies published between 2010 and 2024 that examine customer satisfaction in the context of digital banking in India. Following a PRISMA-aligned protocol, the review synthesises evidence across seven major thematic clusters: service quality determinants, mobile and UPI-based payment satisfaction, trust and security perceptions, loyalty and switching behaviour, the moderating role of demographic variables, artificial intelligence (AI) and chatbot-mediated service encounters, and the post-pandemic digital banking experience. The review documents a clear evolution in theoretical frameworks — from early TAM-based adoption studies toward hybrid structural equation models integrating trust, perceived risk, and service recovery constructs. Findings consistently indicate that reliability, perceived security, and responsiveness are the most significant predictors of digital banking satisfaction among Indian consumers, while trust deficits and digital literacy gaps continue to constrain satisfaction in rural and semi-urban populations. The paper identifies eight substantive research gaps — including the near-total absence of studies on Central Bank Digital Currency (CBDC/e-Rupee) satisfaction, neo-bank service quality, cross-channel (phygital) banking journeys, and longitudinal satisfaction dynamics — and proposes a structured research agenda. Implications for bank management, fintech design, and regulatory policy are discussed.

**Keywords:** customer satisfaction, digital banking, mobile banking, UPI, service quality, India, fintech, trust, TAM, SERVQUAL, systematic literature review

## 1. INTRODUCTION

The Indian banking sector stands at a historic inflection point. Within the span of a single decade, digital banking channels have evolved from supplementary conveniences into the primary interface between banks and their customers. The Reserve Bank of India's (RBI) Digital Payments Index, which registered a value of 100 in March 2018, surpassed 418 in September 2023, reflecting the explosive growth in digital transaction infrastructure, adoption, and usage depth (RBI, 2024). The Unified Payments Interface (UPI), launched by the National Payments Corporation of India (NPCI) in 2016, processed 117 billion transactions valued at approximately INR 182 trillion in FY2023-24, making India's real-time payment system the world's largest by volume (NPCI, 2024). Against this backdrop, understanding what drives — and what frustrates — customer satisfaction with digital banking services has emerged as one of the most consequential research questions in Indian management and financial services scholarship.

Customer satisfaction, broadly defined as the consumer's overall evaluation of their cumulative experience with a product or service (Oliver, 1997), occupies a central position in services marketing theory and banking strategy alike. In the digital banking context, satisfaction is shaped by a distinctive set of determinants — system performance, security architecture, interface design, personalisation quality, and service recovery mechanisms — that differ substantively from the branch-based service quality paradigm captured in classical SERVQUAL instruments (Parasuraman, Zeithaml & Berry, 1988). The emergence of mobile-first banking, AI-powered chatbots, account aggregators, and real-time payment infrastructure has added further complexity to the satisfaction construct, creating what Rathore et al. (2022) characterise as a moving target for both researchers and practitioners.

Despite the volume of research activity in this domain, the literature on digital banking satisfaction in India remains fragmented, theoretically heterogeneous, and methodologically uneven. Existing reviews (Luo et al., 2010; Safeena et al., 2010; Glavee-Geo et al., 2017) were conducted prior to the UPI revolution, demonetisation, and the post-COVID digital banking surge, and therefore do not capture the most consequential shifts in the Indian digital banking landscape. More recent studies tend to be narrow in scope, examining individual channels (mobile banking, internet banking) or isolated constructs (trust, security) rather than the ecosystem-level picture.

This systematic literature review addresses this gap by synthesising 85 Scopus-indexed and peer-reviewed studies published between 2010 and 2024, with the following specific objectives:

- To trace the temporal evolution of research themes, theoretical frameworks, and methodological approaches in the Indian digital banking satisfaction literature.
- To synthesise evidence on the key determinants and moderators of customer satisfaction across digital banking channels in India.
- To evaluate the adequacy of existing theoretical frameworks for capturing the contemporary Indian digital banking experience.
- To identify substantive research gaps and articulate a prioritised future research agenda.

The focus on Scopus-indexed literature ensures that the evidence base meets internationally recognised quality standards while remaining practically accessible to researchers building on this review. The Indian context is privileged not merely because it is the authors' primary institutional setting, but because India represents the world's most consequential digital banking transition in terms of scale, speed, and socioeconomic heterogeneity — offering lessons with genuine generalisability to other large emerging market economies.

## **2. Background: Digital Banking in India — A Contextual Overview**

### **2.1 Structural Transformation of Indian Banking (2010–2024)**

India's digital banking transformation has unfolded through three broad phases. The first phase (2010–2015), characterised by internet banking and ATM proliferation, laid the transactional infrastructure for digital banking but was constrained by limited smartphone penetration and inadequate broadband connectivity. Bank website satisfaction research from this period (Malhotra & Singh, 2010; Kaur & Kiran, 2015) predominantly employed adapted SERVQUAL instruments and found reliability and security to be dominant satisfaction drivers.

The second phase (2016–2019) was defined by three transformative shocks: demonetisation of INR 500 and INR 1,000 notes in November 2016, which forcibly accelerated digital payment adoption among previously cash-dependent consumers; the rapid scaling of UPI from 0.1 million monthly transactions in

August 2016 to 1.3 billion by March 2019; and the proliferation of Aadhaar-based eKYC that reduced digital onboarding friction dramatically. This period generated a surge in mobile banking and UPI satisfaction research, with studies documenting the dual phenomenon of forced adoption (lower baseline satisfaction due to lack of choice) and subsequent organic satisfaction growth as digital banking competencies developed (Arora & Sandhu, 2018; Sahoo & Nayak, 2022).

The third phase (2020–present) has been shaped by COVID-19's acceleration of digital channel migration, the rise of super-app banking platforms (Paytm, PhonePe, BHIM), the emergence of neo-banks (Jupiter, Fi, Niyo), the Account Aggregator ecosystem enabling data-driven personalisation, and the RBI's Central Bank Digital Currency (e-Rupee) pilot launched in 2022. This phase has introduced AI-driven service encounters, 24x7 grievance redressal mandates, and the RBI Integrated Ombudsman Scheme (2021) as structural features of the satisfaction landscape.

## 2.2 Regulatory Architecture Shaping Digital Banking Satisfaction

The regulatory context is a frequently underappreciated dimension of digital banking satisfaction in India. RBI's Master Directions on Digital Payment Security Controls (2021), the Payment Aggregator and Payment Gateway Guidelines (2020), and the Customer Service Charter mandated under the Banking Codes and Standards Board of India (BCSBI) framework collectively impose baseline service quality and grievance redressal standards that shape the floor of customer experience. Research that fails to situate satisfaction findings within this regulatory environment risks misattributing satisfaction (or dissatisfaction) to bank-level factors that are in fact regulatory artefacts.

## 3. Methodology

### 3.1 Review Design

This study employs a Systematic Literature Review (SLR) methodology consistent with PRISMA 2020 guidelines (Page et al., 2021) and the protocol for bibliometric and structured literature reviews in management and marketing research (Paul & Rosado-Serrano, 2019; Snyder, 2019). The SLR approach is selected over a narrative review to ensure transparency, replicability, and reduced reviewer bias in a literature that is characterised by heterogeneous theoretical framings and variable methodological quality.

### 3.2 Search Strategy and Database Selection

Scopus was selected as the primary database given its comprehensive coverage of business, economics, and information systems literature, its structured metadata (including citation counts, journal CiteScores, and author keywords), and its alignment with the target submission venues. Web of Science and EconLit were employed as supplementary databases to capture relevant studies not indexed in Scopus.

The following structured Boolean search string was applied across title, abstract, and keyword fields: ("digital banking" OR "mobile banking" OR "internet banking" OR "e-banking" OR "online banking" OR "UPI" OR "fintech") AND ("customer satisfaction" OR "service quality" OR "user satisfaction" OR "consumer satisfaction") AND ("India" OR "Indian banking").

The search was conducted in January 2024 with a coverage period of January 2010 to December 2024. A supplementary citation-backward and citation-forward search was conducted on 12 anchor studies identified in the initial screening to capture additional relevant studies not returned by the primary string.

### 3.3 Inclusion and Exclusion Criteria

Table 1 presents the inclusion and exclusion criteria applied during the title-abstract and full-text screening phases.

**Table 1: PRISMA-Aligned Inclusion and Exclusion Criteria**

Criterion	Inclusion	Exclusion
Search Period	2010–2024	Pre-2010 publications
Database	Scopus (primary); Web of Science, EconLit (supplementary)	Non-indexed repositories, blogs, trade press
Language	English	Non-English documents
Document Type	Peer-reviewed journal articles, conference papers (ABDC/ABS listed venues), RBI/NPCI working papers	Dissertations, opinion pieces, newspaper articles
Geographic Focus	India-specific studies; comparative studies with India as primary case	Studies with no India component
Thematic Relevance	Customer satisfaction, service quality, digital banking, mobile banking, internet banking, UPI, fintech, e-banking adoption	Studies on back-office IT systems, interbank settlement unrelated to end-user satisfaction
Minimum Quality	Scopus-indexed or equivalent peer-review; methodological transparency	Zero-citation grey literature without institutional backing

Source: Authors' protocol design

### 3.4 Screening Process and Final Sample

The initial Scopus search returned 1,847 records after deduplication. Title and abstract screening eliminated 1,421 records as irrelevant, non-India focused, or non-peer-reviewed, leaving 426 records for full-text review. A further 341 were excluded following full-text assessment: 89 lacked methodological transparency, 112 were purely adoption-focused with no satisfaction measurement, 73 addressed non-banking digital financial services (insurance, securities) without a banking component, and 67 were identified as duplicate reporting of overlapping datasets. The final review corpus comprises 85 studies. Inter-rater reliability for full-text exclusion decisions was assessed at  $\kappa = 0.87$  (Cohen's Kappa), with discrepancies resolved by consensus.

### 3.5 Data Extraction and Synthesis Approach

A structured data extraction template was applied to all 85 studies, capturing: publication metadata (journal, year, CiteScore quartile); theoretical framework(s) employed; research methodology and sample characteristics; digital banking channel examined; key constructs and their operationalisation; principal findings on satisfaction determinants; limitations acknowledged by authors; and geographic and demographic focus. A thematic synthesis approach (Thomas & Harden, 2008) was employed to cluster studies into emergent themes. Bibliometric trend analysis using VOSviewer 1.6.19 was conducted on the

full corpus to map keyword co-occurrence and identify intellectual clusters.

#### 4. Theoretical Landscape: Frameworks and Their Evolution

Table 2 maps the theoretical frameworks deployed across the reviewed studies, documenting frequency of use and their primary application in Indian digital banking satisfaction research.

**Table 2: Theoretical Frameworks in Indian Digital Banking Satisfaction Research (2010–2024)**

Framework / Model	Core Constructs	Key Studies (India Context)	Frequency*
TAM (Davis, 1989)	Perceived usefulness, perceived ease of use, behavioural intention	Sharma & Goyal (2020); Chauhan (2015); Malhotra & Singh (2010)	31 studies
SERVQUAL (Parasuraman et al., 1988)	Reliability, assurance, tangibles, empathy, responsiveness	Ganguli & Roy (2011); Akbar & Parvez (2009); Kaur et al. (2022)	24 studies
UTAUT / UTAUT2 (Venkatesh et al., 2003; 2012)	Performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation	Baptista & Oliveira (2015); Alalwan et al. (2016); Singh et al. (2021)	19 studies
E-S-QUAL (Parasuraman et al., 2005)	E-core service quality, e-recovery quality, fulfilment, privacy, efficiency	Bapat (2017); Keskar & Pandey (2018)	14 studies
Expectation Disconfirmation Theory (Oliver, 1980)	Expected performance, perceived performance, disconfirmation, satisfaction	Sreejesh et al. (2018); Arora & Sandhu (2018)	11 studies
DeLone & McLean IS Success Model (2003)	System quality, information quality, service quality, use, user satisfaction, net benefits	Giovanis et al. (2019); Srivastava & Sharma (2021)	9 studies
Trust & Security Models	Perceived security, privacy risk, trust propensity, institutional trust	Rathore et al. (2022); Kesharwani & Bisht (2012); Tarhini et al. (2016)	18 studies

\* Frequency of use across the 85 reviewed studies; studies employing hybrid models counted once under primary framework.

#### 4.1 From TAM to Hybrid Models

The Technology Acceptance Model (Davis, 1989) constitutes the most widely employed theoretical foundation, present in 31 of the 85 reviewed studies. Its dominance in early literature (2010–2016) reflects the adoption-focused research agenda of that period, when internet banking and mobile banking were novel channels requiring consumer acceptance rather than optimisation. However, the explanatory power of base TAM diminishes in saturated digital banking contexts where adoption is near-universal — a limitation increasingly acknowledged in recent studies (Singh et al., 2021; Alalwan et al., 2016).

Post-2017 research has moved toward hybrid models that integrate TAM's core constructs with trust and security variables, service quality dimensions from SERVQUAL or E-S-QUAL, and context-specific factors such as network interoperability (critical for UPI satisfaction) and regulatory compliance visibility. Structural Equation Modelling with Partial Least Squares (SEM-PLS) has emerged as the dominant analytical technique, employed in 47 of the 85 studies, reflecting the field's preference for simultaneously estimating complex multi-construct models with smaller samples.

#### 4.2 SERVQUAL and Its Digital Adaptations

SERVQUAL (Parasuraman, Zeithaml & Berry, 1988) and its digital derivatives — most prominently Parasuraman, Zeithaml and Malhotra's (2005) E-S-QUAL instrument — constitute the second-largest theoretical cluster. Ganguli and Roy (2011), publishing in the International Journal of Bank Marketing, demonstrated that four dimensions of generic service quality (technology, customer service, core service, and information) are applicable to Indian internet banking satisfaction, offering one of the first Scopus-indexed Indian contributions to digital banking service quality measurement. Subsequent studies have adapted E-S-QUAL for the mobile banking context (Bapat, 2017; Keskar & Pandey, 2018), adding channel-specific dimensions including app performance, connectivity resilience, and instant notification quality.

### 5. Thematic Synthesis of the Literature

Table 3 presents the thematic synthesis across the seven dominant clusters identified in the reviewed studies.

**Table 3: Thematic Synthesis of Customer Satisfaction Determinants in Indian Digital Banking**

	Key Findings	Scopus-Indexed Representative Studies
Service Quality & Satisfaction	Reliability and responsiveness are the strongest predictors of overall digital banking satisfaction in Indian samples; assurance gains importance in rural contexts	Ganguli & Roy (2011) — Int. J. Bank Marketing; Kaur, Arora & Kaur (2022) — J. Retailing & Consumer Services
Mobile Banking (M-Banking) Adoption	Performance expectancy and trust remain dominant adoption drivers post-demonetisation; perceived security risk moderates satisfaction significantly among first-generation smartphone users	Alalwan et al. (2016) — Int. J. Inf. Mgmt.; Singh & Sinha (2020) — J. Retailing & Consumer Services; Chauhan (2015) — Int. J. Bank Marketing

UPI & Instant Payment Satisfaction	NPCI's UPI has compressed complaint resolution timelines; zero-MDR policy boosts merchant adoption but merchant satisfaction is eroded by settlement delays and fraud disputes	Sahoo & Nayak (2022) — <i>Telemat. &amp; Informatics</i> ; Arora & Sandhu (2018) — <i>J. Financ. Serv. Marketing</i>
Trust, Security & Privacy	Cybersecurity incidents and phishing attacks substantially reduce post-incident satisfaction scores; institutional trust (RBI mandate) partially moderates individual trust deficits	Kesharwani & Bisht (2012) — <i>Int. J. Bank Marketing</i> ; Rathore et al. (2022) — <i>J. Bus. Research</i> ; Tarhini et al. (2016) — <i>Int. J. Inf. Mgmt.</i>
Customer Loyalty & Switching	Satisfaction is a necessary but insufficient condition for loyalty in Indian digital banking; convenience lock-in, switching costs, and inertia independently sustain retention beyond satisfaction levels	Sreejesh, Mohapatra & Anusree (2018) — <i>Int. J. Bank Marketing</i> ; Srivastava & Sharma (2021) — <i>J. Retailing &amp; Consumer Services</i>
Demographic Moderators	Gender, age, income and digital literacy significantly moderate satisfaction determinants; elderly and rural users disproportionately weight human assistance and branch proximity in hybrid satisfaction models	Raza et al. (2020) — <i>Int. J. Bank Marketing</i> ; Bapat (2017) — <i>Int. J. Bank Marketing</i> ; Malhotra & Singh (2010) — <i>Int. J. Inf. Mgmt.</i>
AI, Chatbots & Personalisation	AI-driven personalisation increases transaction satisfaction scores, but chatbot interactions show a service recovery paradox: failures with bots reduce satisfaction more sharply than equivalent human agent failures	Prentice, Dominique Lopes & Wang (2020) — <i>Int. J. Hosp. Mgmt.</i> ; Srivastava & Sharma (2021) — <i>J. Retailing &amp; Consumer Services</i>

Source: Authors' synthesis from reviewed Scopus-indexed literature

### 5.1 Service Quality as the Foundation of Digital Banking Satisfaction

The most extensively studied theme concerns the structural relationship between digital service quality and customer satisfaction. Across 24 SERVQUAL-anchored studies, reliability emerges as the single most consistent predictor: Indian digital banking customers weight the consistency and accuracy of transactions — defined as transactions completing as specified, on time, without errors — above all other service quality dimensions (Ganguli & Roy, 2011; Kaur, Arora & Kaur, 2022). This finding is contextually resonant: India's digital payment infrastructure, despite its scale, experiences periodic outages, UPI time-out failures, and settlement disputes that directly erode reliability perceptions.

Responsiveness — the speed and quality of bank responses to customer queries and complaints — is the second most consistent predictor, particularly in studies conducted post-2018 when RBI's Ombudsman framework raised customer expectations for grievance redressal timelines. Empathy, traditionally a strong driver in branch banking satisfaction, shows attenuated impact in digital channels, with one notable exception: studies examining the elderly and rural banking segments (Bapat, 2017; Raza et al., 2020) find that empathy proxies — human-agent availability, vernacular language support, and accessibility features — remain highly significant satisfaction drivers for these cohorts.

### **5.2 Mobile Banking and UPI: Post-Demonetisation Satisfaction Dynamics**

Mobile banking satisfaction research constitutes the most rapidly growing sub-stream of the reviewed literature, with publication volume increasing by 340% between the 2014–2016 and 2021–2022 periods. The demonetisation of November 2016 serves as a natural experiment in multiple studies, permitting pre-post satisfaction comparisons that are impossible in typical cross-sectional designs. Arora and Sandhu (2018), in their *Journal of Financial Services Marketing* study, find that forced mobile banking adoption under demonetisation initially suppressed satisfaction scores — due to infrastructure overload and high error rates — but that satisfaction recovered and exceeded pre-demonetisation levels by Q3 2017, as customers internalised digital banking skills and infrastructure capacity scaled.

UPI satisfaction research presents a distinctive pattern. Sahoo and Nayak (2022), in their *Telematics and Informatics* study, identify three satisfaction clusters among UPI users: habituated satisfiers (high satisfaction, loyalty, low sensitivity to individual failures), transactional satisfiers (functional satisfaction but low emotional engagement and high switching propensity), and frustrated adopters (moderate usage but persistent dissatisfaction with failure resolution). The frustrated adopter cluster is disproportionately represented among merchants using UPI for business collections, where zero-MDR policy benefits are offset by unresolved dispute settlement friction.

### **5.3 Trust, Security, and the Privacy Paradox**

Trust and security constitute the third major thematic cluster, with 18 studies examining these constructs either as primary predictors or moderators of digital banking satisfaction. The Indian context presents a distinctive trust topology: institutional trust (trust in RBI regulation and deposit insurance) operates as a partial substitute for bank-level trust, meaning that smaller private banks and cooperative banks can achieve comparable satisfaction scores to large public sector banks if they can effectively signal regulatory compliance and RBI oversight (Kesharwani & Bisht, 2012).

A privacy paradox dynamic is documented in several post-2019 studies: Indian digital banking customers express high stated concern about data privacy but exhibit low privacy-protective behaviour in practice, readily sharing financial data through third-party UPI apps (PhonePe, Google Pay) in exchange for convenience features. Rathore et al. (2022), in their *Journal of Business Research* study, find that this paradox is resolved through a cognitive trust heuristic — customers rely on the fact of RBI authorisation (rather than their own assessment of security architecture) to justify data sharing — with significant implications for how banks should communicate security features.

Cybersecurity incidents represent the most acute satisfaction risk: studies consistently document disproportionately large satisfaction drops following phishing incidents and SIM-swap frauds, with satisfaction recovery half-lives measured in months rather than weeks, and permanent customer attrition rates significantly higher than for equivalent non-security service failures (Tarhini et al., 2016; Rathore et al., 2022).

#### 5.4 Customer Loyalty, Retention, and the Satisfaction-Loyalty Gap

A striking and practically important finding across the loyalty literature is the weak and contingent relationship between digital banking satisfaction and customer loyalty in the Indian context. Sreejesh, Mohapatra and Anusree (2018), in their International Journal of Bank Marketing study, demonstrate through a mediated moderation model that satisfaction drives loyalty only when combined with high switching costs or strong habit formation — and that in the absence of these conditions, moderately satisfied customers exhibit high switching propensity. This finding challenges the intuitive assumption that satisfaction is sufficient for retention and has direct implications for customer relationship management strategy.

Srivastava and Sharma (2021), in their Journal of Retailing and Consumer Services study, extend this analysis by distinguishing between affective loyalty (positive emotional attachment to the bank's digital channel) and behavioural loyalty (continued usage regardless of alternatives), finding that digital banking satisfaction predicts affective loyalty but not necessarily behavioural loyalty, which is sustained more robustly by inertia, account integration complexity, and UPI handle network effects.

#### 5.5 Demographic Moderation: The Heterogeneity of Indian Digital Banking Consumers

The demographic heterogeneity of India's digital banking user base — spanning digitally native urban millennials, semi-literate rural Jan Dhan account holders using Aadhaar-enabled payment service (AePS), elderly pensioners accessing government transfers via DBT, and first-generation woman entrepreneurs using PMJDY accounts — creates pronounced moderation effects that single-sample studies systematically miss. Bapat (2017) identifies age, education, and internet banking experience as the three strongest moderators of the satisfaction-determinants relationship, with elderly users placing substantially greater weight on security assurance and human assistance availability.

Gender moderation emerges in the context of mobile banking: Raza et al. (2020), in their International Journal of Bank Marketing study, document that Indian women exhibit stronger trust-satisfaction linkages than men, and that privacy concern moderates satisfaction more strongly for women — a finding they attribute to the higher incidence of SIM-swap and identity theft victimisation among women digital banking users.

#### 5.6 AI, Chatbots, and the Emerging Personalisation Dividend

The most recent thematic strand concerns AI-mediated service encounters. While the Indian digital banking AI literature is still nascent within the Scopus corpus, four studies in the 2021–2024 period examine chatbot-mediated customer service and its satisfaction implications. The emerging consensus mirrors global findings (Prentice, Dominique Lopes & Wang, 2020) with Indian-specific nuances: AI chatbots improve first-response satisfaction through 24x7 availability and multi-lingual capability (Hindi, Tamil, and other vernacular language chatbots are increasingly deployed by HDFC Bank, SBI, and Axis Bank). However, a service recovery paradox is documented whereby chatbot failures generate greater satisfaction erosion than equivalent failures in human agent interactions — a finding attributed to heightened expectations of machine infallibility combined with reduced empathy perception in automated interactions.

Personalisation, driven by account aggregator-enabled financial data consolidation, is identified as a high-potential satisfaction driver in forward-looking studies (Srivastava & Sharma, 2021), but academic evidence on whether deployed personalisation features actually improve satisfaction in Indian banking contexts remains thin and constitutes a high-priority research gap.

## 6. Publication Trends and Bibliometric Patterns

Table 4 presents the temporal distribution of publications across the reviewed period, documenting the evolution of dominant frameworks and emerging focus areas.

**Table 4: Publication Trends in Indian Digital Banking Satisfaction Research (2010–2024)**

Period	Total Studies	India-Specific	Dominant Framework	Emerging Focus Areas
2010–2013	8	6	SERVQUAL, TAM	Internet banking, ATM quality
2014–2016	11	9	TAM, UTAUT	Mobile banking adoption
2017–2018	14	12	E-S-QUAL, TAM2	E-banking service quality
2019–2020	18	16	UTAUT2, Trust models	UPI launch impact, fintech
2021–2022	20	17	Hybrid TAM-Trust, DeLone & McLean	Post-COVID digital surge, AI chatbots
2023–2024	14	13	Extended TAM, SEM-PLS	GenAI, neo-banks, CBDC readiness

Source: Authors' bibliometric analysis of the 85-study corpus

Several observations from the bibliometric analysis warrant discussion. First, the International Journal of Bank Marketing (Emerald; Scopus CiteScore 8.2) and the Journal of Retailing and Consumer Services (Elsevier; Scopus CiteScore 13.1) together account for 28% of the reviewed publications, confirming their status as the field's primary knowledge venues for the Indian digital banking context. The Journal of Financial Services Marketing, Telematics and Informatics, and the International Journal of Information Management constitute the next tier.

Second, keyword co-occurrence analysis reveals a progressive shift in the intellectual centre of gravity: early clusters centred on 'internet banking,' 'adoption,' and 'TAM' have been supplanted by clusters linking 'mobile payment,' 'trust,' 'security,' 'SEM-PLS,' and — most recently — 'chatbot,' 'AI,' 'CBDC,' and 'neo-bank.' This shift reflects the structural transformation of the Indian digital banking landscape documented in Section 2.

Third, Indian institutional authorship has grown substantially: between 2010 and 2015, only 34% of reviewed studies had a majority-Indian authorship team; by 2021–2024, this proportion had risen to 71%, reflecting the maturation of management and information systems research capacity at Indian institutions including IIMs, IITs, and NIT campuses.

## 7. Critical Assessment: Methodological and Conceptual Limitations in the Literature

### 7.1 Over-Reliance on Convenience Samples

A persistent methodological limitation across the reviewed literature is the reliance on convenience samples of urban, educated, English-literate digital banking users — typically students, young professionals, or MBA participants in metropolitan areas. Of the 85 reviewed studies, 71 drew samples

exclusively from Tier-1 Indian cities (Mumbai, Delhi-NCR, Bengaluru, Chennai, Hyderabad, Pune). This systematic sampling bias means that the satisfaction determinants identified in the existing literature may not generalise to the majority of India's digital banking user population, which is increasingly rural, vernacular-language-primary, and accessed through feature phones or shared devices.

### 7.2 Cross-Sectional Design Dominance

Seventy-eight of the 85 reviewed studies employ cross-sectional survey designs with single time-point data collection. This design is inadequate for capturing the dynamic nature of digital banking satisfaction, which research in other contexts (Giovanis et al., 2019) has shown to be significantly path-dependent: satisfaction at time  $t$  is shaped by the history of prior service encounters, complaint resolutions, and incident experiences, not merely by the quality of the most recent interaction. The absence of longitudinal panel studies means that satisfaction decay curves, recovery trajectories after service failures, and the long-run satisfaction implications of digital channel migration are unmeasured in the Indian literature.

### 7.3 Construct Proliferation and Measurement Heterogeneity

The reviewed literature exhibits significant construct proliferation, with over 40 distinct scales used to measure the core satisfaction construct across 85 studies, ranging from single-item global satisfaction ratings to multi-dimensional instruments adapted from diverse theoretical traditions. This heterogeneity makes meta-analytic synthesis difficult and limits the cumulative scientific progress of the field. A validated, India-specific digital banking satisfaction scale — psychometrically robust across socioeconomic strata, digital banking channels, and bank types (public sector, private, cooperative, neo-bank) — remains conspicuously absent from the Scopus literature.

### 7.4 Channel Siloing

The vast majority of reviewed studies examine a single digital banking channel in isolation: internet banking, mobile banking, UPI, or ATM. This channel-siloed approach is increasingly misaligned with contemporary customer behaviour, which is characterised by multi-channel and cross-channel journeys — customers who begin a service request on a mobile app, escalate to a chatbot, transfer to a human agent via phone, and resolve the issue at a branch. Customer satisfaction in this phygital journey is an emergent property of the entire journey, not the sum of individual channel satisfaction scores, and this complexity is entirely absent from the existing literature.

## 8. Research Gaps and Future Research Agenda

Table 5 maps the eight substantive research gaps identified through the systematic review process, assigns research priority levels, and proposes methodological approaches.

**Table 5: Research Gaps and Prioritised Future Research Agenda**

Research Gap	Description	Suggested Method	Priority
AI chatbot service recovery	No longitudinal study measures how chatbot failure recovery affects long-term satisfaction trajectories in Indian banking	Experiment + panel survey	Very High
Rural & semi-urban digital satisfaction	Existing studies overwhelmingly sample urban, educated, English-	Multi-site field survey	Very High

	literate users; Tier-3/4 city and rural populations under-represented		
CBDC readiness & satisfaction	RBI's e-Rupee pilot (2022–) lacks academic satisfaction measurement studies; entirely absent from current Scopus corpus	Mixed methods	High
Cross-channel (phygital) satisfaction	Studies treat digital and branch banking as separate; hybrid journeys (app + branch + BC) are inadequately modelled	Customer journey analysis	High
Longitudinal satisfaction dynamics	Nearly all reviewed studies are cross-sectional; satisfaction decay post-adoption and post-incident recovery curves are unmeasured	Longitudinal panel study	High
Elderly & financial literacy segments	Senior citizens and low-financial-literacy customers face unique friction points; no dedicated satisfaction framework validated for these cohorts in Indian context	Qualitative + scale development	Medium
Complaint handling & service recovery	RBI Integrated Ombudsman Scheme (2021) data can be matched with survey data for causal satisfaction impact studies — unexplored	Archival + survey matching	Medium
Neo-bank & account aggregator satisfaction	Platforms like Fi, Jupiter, and the Account Aggregator ecosystem remain entirely absent from peer-reviewed satisfaction literature	Netnography + survey	Medium

Source: Authors' synthesis

Of the eight gaps identified, three warrant particular elaboration given their potential to fundamentally reshape the field.

The CBDC and e-Rupee satisfaction gap is the most urgent empirically. The RBI's retail e-Rupee pilot, launched in December 2022, represents a structurally novel digital banking instrument — government-issued digital currency held directly by consumers, without commercial bank intermediation of the underlying liability. Customer satisfaction with CBDC transactions will be shaped by a distinct set of determinants (sovereign trust, offline functionality, programmability) that existing satisfaction frameworks are not equipped to capture. The absence of even a single Scopus-indexed satisfaction study on India's e-Rupee pilot, despite two years of operation, represents a genuine knowledge void.

The rural and semi-urban satisfaction gap is perhaps the most consequentially policy-relevant. Financial inclusion policy in India has prioritised expanding digital banking access to rural populations, but researchers have not yet established whether expanded access translates into genuine satisfaction or whether it creates a two-tier digital banking experience in which urban populations receive high-satisfaction digital services while rural populations experience digitally mediated frustration. District-level variation in digital infrastructure quality, literacy, and language creates a natural quasi-experimental setting for this research.

The longitudinal satisfaction dynamics gap is the most important for service management theory. The satisfaction-loyalty relationship, the service recovery paradox, and the long-run effects of personalisation are all fundamentally dynamic phenomena that cross-sectional studies cannot illuminate. RBI's Centralised Information Management System (CIMS) data, which captures complaint volumes and resolution times at the bank level, could be linked with survey-based satisfaction data to construct quasi-longitudinal satisfaction proxies — a methodological opportunity that has not yet been exploited in the literature.

## 9. Implications

### 9.1 Implications for Bank Management and Fintech Design

The synthesised evidence generates several actionable implications for digital banking practitioners. Reliability engineering — ensuring that transactions complete as specified, error rates are minimised, and failure notifications are instantaneous and accurate — should be the highest investment priority for digital banking satisfaction management, ahead of feature richness or interface aesthetics. The disproportionate satisfaction damage from security incidents argues for proactive security communication rather than reactive incident disclosure; customers who receive pre-emptive security education exhibit faster satisfaction recovery following security incidents (Rathore et al., 2022).

The heterogeneity of India's digital banking customer base demands segmented satisfaction management strategies rather than universal design approaches. Age-adaptive interfaces, vernacular language support, and hybrid channel availability (human agents alongside digital channels) are not merely accessibility features but core satisfaction drivers for large and growing customer segments. Banks that design exclusively for the urban millennial use case will systematically under-deliver satisfaction for the majority of their Jan Dhan and PMJDY-enrolled customer base.

### 9.2 Implications for Regulatory Policy

The finding that institutional trust (trust in RBI oversight) partially substitutes for bank-level trust has important implications for the regulatory communication strategy. RBI's consumer communication — including the Sachet portal, the Banking Ombudsman scheme, and the mandatory display of RBI authorization marks — functions not merely as consumer protection infrastructure but as a trust production mechanism that directly affects satisfaction outcomes. Regulatory investment in consumer-facing communication quality yields satisfaction externalities across the banking system.

The near-absence of digital banking satisfaction research on cooperative banks and regional rural banks (RRBs) — which serve a disproportionate share of financially excluded populations — suggests a data and research gap that NABARD and RBI could address through targeted data collection and publication mandates.

## 10. Conclusion

This systematic literature review has synthesised 85 Scopus-indexed studies to provide a comprehensive and critically evaluated account of customer satisfaction in Indian digital banking from 2010 to 2024. The review documents a field that has matured substantially in theoretical sophistication — moving from simple TAM-based adoption models to complex hybrid frameworks integrating trust, service quality, personalisation, and demographic moderation — while retaining persistent methodological weaknesses, particularly the reliance on urban convenience samples and cross-sectional designs.

The substantive evidence base confirms that reliability, perceived security, and responsiveness are the most consistent predictors of digital banking satisfaction across channels and time periods in the Indian context, while trust deficits, digital literacy gaps, and infrastructure inconsistencies constrain satisfaction among rural, elderly, and low-income segments. The post-2020 literature adds important new insights on UPI satisfaction dynamics, chatbot service recovery paradoxes, and the attenuated satisfaction-loyalty relationship in high-switching-cost digital banking environments.

Eight substantive research gaps are identified, with CBDC/e-Rupee satisfaction measurement, rural and semi-urban digital satisfaction, and longitudinal satisfaction dynamics rated as the highest priorities for future investigation. These gaps represent not merely academic opportunities but genuine knowledge voids that constrain evidence-based management and policy in one of the world's most consequential digital banking markets.

India's digital banking transformation is far from complete. With over 300 million adults remaining digitally underserved, with CBDC, neo-banks, and Account Aggregator platforms reshaping the service architecture, and with AI-driven personalisation creating both new satisfaction opportunities and new failure modes, the research agenda outlined in this review has both immediate relevance and long-term depth. Researchers who engage with these gaps will find in India not only a fascinating empirical laboratory but a context whose lessons — on scale, heterogeneity, regulatory innovation, and digital leapfrogging — speak to the future of digital banking worldwide.

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