Investigating the influence of employee engagement on customer satisfaction in digital banking: A systematic review

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Abstract

The rapid expansion of digital banking has reshaped service delivery, yet existing research has emphasised technological determinants of customer satisfaction while paying less attention to employees. This systematic review examines the influence of employee engagement on customer satisfaction in digital banking, synthesising evidence from contemporary literature. Guided by the PRISMA 2020 framework, a systematic search was conducted across Scopus, Web of Science, ScienceDirect, Emerald Insight, and SpringerLink for studies published between January 2015 and April 2026. Following predefined inclusion and exclusion criteria, 51 peer-reviewed studies were selected and analysed thematically. The review identifies seven major themes: employee engagement dimensions, customer satisfaction determinants, technology versus human interaction, employee engagement and service quality, the influence of engagement on satisfaction, challenges in digital banking, and future research trends. Employee engagement remains a critical driver of customer satisfaction despite increasing automation, chiefly through its effect on service quality, CRM effectiveness, and discretionary employee behaviours. Digital technologies enhance efficiency but do not replace engaged employees in managing complex, trust-based, and emotionally sensitive interactions. The review highlights theoretical, methodological, and geographical gaps and proposes directions for future research, concluding that employee engagement should be treated as a strategic capability that complements digital transformation and strengthens customer satisfaction and competitive performance in banking.

Keywords: Banking sector, Customer satisfaction, Digital banking, Employee engagement, Service quality, Systematic review.

1. Introduction

The banking industry is undergoing an irreversible shift from branch-based transactional models to platforms built on mobile applications, online interfaces, USSD, and increasingly AI-powered conversation, driven by fintech competition and customers' demands for convenience and speed. Digital banking, the provision of financial services through electronic and self-service channels, has become the chief arena of competition among retail banks, and customer satisfaction, widely accepted as the best proxy for a bank's ability to retain deposits, sell products, and profit in an era of low switching costs, sits at the core of this competition. Unsurprisingly, most empirical research on customer satisfaction in digital banking has focused on the interface itself.

Yet banks remain labour-intensive despite automation: staff still set up, control, and debug systems, resolve exceptions self-service cannot handle, and supply the human element in contact centres and chats. Engaged employees, those investing cognitive, affective, and physical effort, produce better service outcomes, an internal state Kahn (1990) frames as harnessing organisational members' selves to their role tasks and later operationalised as vigour, dedication, and absorption (Bakker & Demerouti, 2008). Customer satisfaction carries a comparable lineage: the expectancy-disconfirmation paradigm (Oliver, 1980) and the service-quality tradition of reliability, responsiveness, assurance, empathy, and tangibles (Parasuraman *et al*., 1988). Digital banking research largely retains these foundations while substituting a digital interface for the physical servicescape, foregrounding system and information quality at the expense of the human dimensions the original frameworks captured. This relationship between employee engagement and customer satisfaction in digital banking is the focus of this review.

Banking is an especially useful case for studying this intersection, since retail banks are both highly digitised and highly dependent on frontline staff for exceptions and sensitive cases. The service-profit chain, linking employee engagement to service value, customer satisfaction, and revenue growth (Heskett *et al*., 1994), offers a long-standing rationale for expecting engagement to matter even in digitally mediated encounters; whether the empirical literature has kept pace with this expectation is the question this review addresses.

1.1 Problem Statement

The literature on digital banking has predominantly focused on technological influences on customer satisfaction, neglecting employee engagement. Where the human element is considered, engagement and satisfaction are typically examined separately. Studies connecting the two constructs exist across various fields, but few situate this connection within digital banking specifically.

1.2 Research Questions

RQ1: What is the current state of research on employee engagement and customer satisfaction in digital banking?
RQ2: How has employee engagement been conceptualised in digital banking studies?
RQ3: What evidence exists regarding the influence of employee engagement on customer satisfaction?
RQ4: What theories underpin this relationship?
RQ5: What research gaps remain?

2. Literature Review

2.1 Employee Engagement

This review conceptualises employee engagement not as a single attitude but as cognitive activity, emotional connection, and discretionary effort (Khan & Ghayas, 2022; Bai & Chen, 2022; Panigrahi *et al*., 2024). In banking, this is seen as emanating from leadership quality: authentic leadership, characterised by transparency, self-awareness, and value congruence, is the most commonly linked antecedent (Khan & Ghayas, 2022; Bai & Chen, 2022; Yeboah & Amankwah, 2025; Prakash *et al*., 2025). Under digital transformation, this influence shifts downward, with middle managers, more than senior executives, disproportionately responsible for sustaining engagement during technology rollouts (Li *et al*., 2024); internal communication, organisational culture, and AI within HR are also emerging antecedents, suggesting engagement drivers are digitalising alongside the channels employees support (Nadales-Gallego *et al*., 2025; Budiadi, 2026; Kanaan *et al*., 2025).

A second strand focuses less on what produces engagement than on what it produces: engaged employees show wider downstream outcomes beyond customer-facing performance, including career sustainability, organisational citizenship behaviour, and openness to technologically driven change (Panigrahi *et al*., 2024;

Tayal *et al*., 2018). Together, these strands suggest engagement in banking is best understood as a mediating psychological state, produced by leadership and organisational conditions, and productive of customer-relevant behaviours, rather than a variable banks can manipulate directly.

2.2 Customer Satisfaction in Digitally Mediated Banking

Even in this channel-focused literature, the employee is rarely absent. Aslam *et al*. (2022) show staff characteristics remain material to satisfaction as channels expand; Kim *et al*. (2024) trace service quality directly to staff job stress and management alignment; Arora and Banerji (2024) find service quality affects loyalty through customer experience and satisfaction, plausibly conditioned by staff disposition. Collectively, the customer satisfaction literature, even where technology-focused, cannot fully explain its findings without implicit reference to the workforce behind the interface.

2.3 Automation and the Persistence of the Human Element

On the employee side, Ganguly *et al*. (2025) document how semi-urban branch staff adapt to the erosion of their traditional role, while Ertiö *et al*. (2024) show technostress from rapid digital adoption can erode engagement unless mitigated by emotionally intelligent digital leadership. Together, this suggests automation and engaged human service are not simple substitutes: automation raises the ceiling on routine-transaction efficiency while leaving, or raising, the floor requirement for engaged judgement in exceptions and emotionally charged encounters.

2.4 Theoretical Perspectives Linking Engagement to Satisfaction

Social Exchange Theory supplies the relational logic connecting the others: employee-employer and employee-customer relationships are reciprocal exchanges of value, so organisations investing in employees through empowerment, internal marketing, or authentic leadership are theorised to receive discretionary effort in return, which customers experience as satisfaction (Berraies *et al*., 2020; Rao Muramalla, 2021). Few studies combine a behavioural adoption theory with Social Exchange Theory in one model, leaving the technological and relational halves more often juxtaposed than integrated, a gap this review returns to in Section 6.

2.5 Towards a Conceptual Framework

Drawing these strands together, this review treats employee engagement as an upstream condition shaped by leadership and organisational practice, customer satisfaction as the downstream outcome, and service quality, CRM effectiveness, and trust as mediating mechanisms, against a backdrop of automation that conditions how, not whether, engagement matters. Table 1 sets out working definitions of the core constructs.

Table 1. Key Constructs and Working Definitions Adopted in This Review

Construct	Working Definition	Illustrative Sources
Employee engagement	The extent to which employees invest cognitive, emotional, and behavioural energy in their work role, expressed as absorption, organisational attachment, and discretionary effort.	Khan & Ghayas (2022); Bai & Chen (2022); Panigrahi et al. (2024)
Customer satisfaction	A customer's evaluative judgement of the extent to which a digital banking service meets	Al-Dmour et al. (2019); Wiryawan et al. (2022)

Construct	Working Definition	Illustrative Sources
	or exceeds expectations across successive interactions.	
Digital banking	The delivery of financial services through electronic and self-service channels, including mobile applications, internet portals, USSD, and AI-enabled interfaces.	Widjaja & Legowo (2024); Singh et al. (2025)
Service quality (mediator)	The perceived standard of service delivery across reliability, responsiveness, and staff-competence dimensions.	Berraies et al. (2020); Delcourt et al. (2017)
CRM effectiveness (mediator)	The degree to which customer relationship management systems and practices translate staff effort and customer data into relationship-sustaining outcomes.	Gumilang et al. (2025); Widjaya et al. (2024)

3. Review Methodology

3.1 Review Design

This study adopts a systematic review methodology guided by PRISMA 2020, preferred over narrative or scoping alternatives for its transparent, replicable procedure, valuable given the area's dispersed terminology and rapid publication growth. Rather than merely cataloguing studies, the review synthesises findings into an interpretive account of how, and under what conditions, employee engagement shapes customer satisfaction in digital banking.

3.2 Search Strategy

A structured electronic search was conducted across five databases selected for coverage of management, information systems, and service-marketing literature. The generic Boolean logic in Table 2 was translated into each database's field-search syntax; the five resulting search strings are reported in Appendix A for reproducibility.

Table 2. Search Strategy and Parameters

Element	Detail
Databases	Scopus, Web of Science, ScienceDirect, Emerald Insight, SpringerLink
Search period	January 2015 – April 2026
Search string	("employee engagement" OR "staff engagement" OR "work engagement") AND ("customer satisfaction") AND ("digital banking" OR "online banking" OR "electronic banking" OR "internet banking" OR "mobile banking")
Boolean operators	AND / OR used to balance sensitivity and specificity
Filters applied	English language; peer-reviewed sources; 2015–2026

3.3 Inclusion and Exclusion Criteria

Table 3 sets out the inclusion and exclusion criteria applied at both the title/abstract and full-text screening stages, building on the search parameters summarised in Table 2 above.

Table 3. Inclusion and Exclusion Criteria

Criterion	Inclusion	Exclusion
Publication type	Peer-reviewed journal articles, book chapters, conference proceedings	Grey literature, blogs, editorials, opinion pieces
Temporal scope	2015–2026	Publications before 2015
Thematic focus	Studies examining employee engagement and/or customer satisfaction in a digital or omnichannel banking context	Studies outside banking or lacking one of the two focal variables
Geographic scope	Global, with no restriction	None applied
Language	English	Non-English publications
Methodological quality	Empirical and theoretical studies with a clearly reported methodology	Studies with insufficient methodological reporting or duplicate records

3.4 Study Selection

Figure 2 presents the PRISMA flow diagram. An initial search across five databases identified 78 records; after removing 4 duplicates, 74 were screened by title and abstract, with none excluded given the deliberately broad search string. All 74 records were sought for full-text retrieval; 3 could not be retrieved. Of the 71 assessed for eligibility, 9 were excluded for pre-2015 publication and 11 for irrelevance to the focal variables, yielding a final corpus of 51 studies.

Stage	Outcome
Identification	Records identified from databases (n = 78)
	Duplicate records removed (n = 4)
Screening	Records screened by title/abstract (n = 74) → Records excluded (n = 0)
	Full-text articles sought for retrieval (n = 74) → Articles not retrieved (n = 3)
Eligibility	Full-text articles assessed for eligibility (n = 71) → Excluded: published before 2015 (n = 9); irrelevant to study (n = 11)
Included	Studies included in the review (n = 51)

3.5 Data Extraction

A standardised data-extraction template captured, for each of the 51 studies, authors and year, country/context, sample and methodology, theoretical framework, thematic codes, and key findings, entered into a coding matrix enabling comparison across themes, contexts, and methods, supporting identification of the seven themes in Section 4.

3.6 Quality Assessment

Methodological quality was assessed using criteria adapted to the corpus's mixed empirical and conceptual nature: clarity of research questions, appropriateness of sampling and measurement, transparency of analytical technique (predominantly PLS-SEM or covariance-based SEM), and coherence between findings and evidence; studies with vague or unverifiable reporting were excluded at the eligibility stage, consistent with Table 3.

4. Results

4.1 Characteristics of Included Studies

The 51 studies span 2017-2026, concentrated from 2022 onward, reflecting accelerated digital banking research after the COVID-19-driven shift to remote financial services. Geographically, the corpus draws mainly on South and Southeast Asia (Pakistan, Indonesia, Sri Lanka, Vietnam), with smaller African, Latin American, European, and East Asian clusters. Methodologically, quantitative surveys analysed via structural equation modelling dominate, alongside a minority of conceptual, meta-analytic, and review contributions. Table 4 summarises representative studies by theme, and Table 5 sets out the most frequently invoked frameworks: TPB, DOI, TAM, and SET.

Table 4. Summary of Included Studies by Thematic Category

Thematic Category	Representative Authors (Year)	Predominant Method
Employee engagement dimensions	Khan & Ghayas (2022); Bai & Chen (2022); Yeboah & Amankwah (2025); Li et al. (2024); Ertiö et al. (2024)	Quantitative survey / SEM
Customer satisfaction determinants	Al-Dmour et al. (2019); Aslam et al. (2022); Arora & Banerji (2024); Alsalamah (2025)	Quantitative survey
Technology versus human interaction	Widjaja & Legowo (2024); Singh, Sharma & Awasthi (2025); Lissillour & Sahut (2026); Jayamanna et al. (2026)	Mixed / conceptual
Employee engagement and service quality	Berraies et al. (2020); Delcourt et al. (2017); Cain et al. (2018); Rao Muramalla (2021)	Structural equation modelling
Influence on customer satisfaction	Shin (2022); Shin, Cho & Lee (2020); Saunila et al. (2019); Le & Tam (2025)	Comparative / PLS-SEM
Challenges in digital banking	Al Issa & Omar (2024); Syed et al. (2025); Abed Alhameed & Emeagwali (2026); Annisa et al. (2024)	Quantitative / PLS-SEM
Future trends	Darwish (2023); Phan (2025)	Conceptual / narrative

Table 5. Theoretical Foundations of the Reviewed Literature

Theory	**Core Proposition**	**Application in Reviewed Literature**
Theory of Planned Behaviour (TPB)	Behavioural intention is shaped by attitudes, subjective norms, and perceived behavioural control	Explains how engaged employees' attitudes toward digital service delivery shape customer-directed behaviour
Diffusion of Innovation (DOI)	Innovations spread through a population as a function of relative advantage, compatibility, and observability	Frames employee and customer adoption of digital banking channels and AI-enabled touchpoints
Technology Acceptance Model (TAM)	Perceived usefulness and ease of use drive technology adoption	Used to explain both staff adoption of digital tools and customer acceptance of chatbot/self-service channels
Social Exchange Theory (SET)	Relationships are sustained by a reciprocal exchange of value between parties	Underpins the reciprocity between engaged employees and loyal, satisfied customers

4.2 Thematic Analysis

Thematic synthesis of the 51 studies produced seven overarching themes, summarised in Table 6. Themes on employee engagement conceptualisation and customer satisfaction determinants were most heavily represented, together over two-fifths of the corpus, while future-oriented and conceptual contributions were comparatively scarce.

Table 6. Distribution of Included Studies (n = 51) Across Thematic Categories

Theme	**No. of Studies**	**% of Corpus**
1. Employee engagement dimensions	11	21.6%
2. Customer satisfaction determinants	10	19.6%
3. Technology versus human interaction	8	15.7%
4. Employee engagement and service quality	7	13.7%
5. Influence on customer satisfaction	7	13.7%
6. Challenges in digital banking	6	11.8%
7. Future trends	2	3.9%
Total	51	100%

4.2.1 Theme 1: Employee Engagement Dimensions

The literature converges on a multidimensional view of engagement, cognitive absorption, affective attachment, and discretionary effort, with leadership as the principal antecedent. Khan and Ghayas (2022) and Bai and Chen (2022) link authentic leadership to engagement in Karachi banks; Yeboah and Amankwah (2025) position psychological empowerment as the mechanism. Li *et al*. (2024) show middle managers' digital leadership drives engagement, while Ertiö *et al*. (2024) find leaders' emotional intelligence mitigates technostress. Budiadi (2026) synthesises transformational leadership, emotional intelligence, and culture as antecedents; Nadales-Gallego *et al*. (2025) add internal communication; Kanaan et al. (2025) add AI within HR. Tayal *et al*. (2018) and Panigrahi *et al*. (2024) connect engagement to change acceptance and career sustainability, while Ghimire *et al*. (2023) ground these dynamics in Nepalese banking.

4.2.2 Theme 2: Customer Satisfaction Determinants

A parallel stream isolates satisfaction drivers without foregrounding the employee. Al-Dmour *et al*. (2019) model customer engagement as an antecedent of satisfaction and loyalty; Aslam *et al*. (2022) find staff traits remain material as channels digitalise; Arora and Banerji (2024) link service quality to loyalty via customer experience; Kim et al. (2024) trace service quality to staff job stress and management alignment. Technology-mediated determinants also feature: Wiryawan *et al*. (2022) apply the DeLone and McLean model in Indonesia; Alsalamah (2025) evaluates AI-driven CRM; Gumilang *et al*. (2025) and Widjaya et al. (2024) examine CRM and retention in Indonesian banking; Zubiria (2021) surveys Peruvian users; and Nantavisit et al. (2023) contribute a meta-analysis of bank employee satisfaction drivers.

4.2.3 Theme 3: Technology versus Human Interaction

A recurring tension concerns whether automation substitutes for or complements human engagement. Widjaja and Legowo (2024) and Singh *et al*. (2025) find AI chatbots generate satisfaction and efficiency in Indonesian banking; Jayamanna et al. (2026) find effectiveness moderated by digital literacy; Wikeshani *et al*. (2025) and Swathi *et al*. (2024) argue chatbots can feel humanised when well designed; Lissillour and Sahut (2026) counter that much of the promise is overstated relative to persistent trust challenges. Ganguly *et al*. (2025) capture how semi-urban staff cope with digital banking's effect on their roles, while Nesindande *et al*. (2024) document broader workplace changes from digital implementation.

4.2.4 Theme 4: Employee Engagement and Service Quality

A well-established stream links engaged frontline behaviour to service quality. Berraies et al. (2020) find empowerment improves service quality and satisfaction in Tunisian banks, mediated by CRM effectiveness; Delcourt *et al*. (2017) show technical and emotional competencies interact in emotionally charged encounters; Cain *et al*. (2018) show perceived engagement fortifies the service-profit chain; and Ferreira and Rodrigues (2018) position engagement as an antecedent of satisfaction-performance among managers. Rao Muramalla (2021) traces this to internal marketing in Indian retail banks, Mamboundou and Konan (2025) show in-role and discretionary behaviours shape loyalty in Cote d'Ivoire banks, and Prakash *et al*. (2025) frame authentic leadership as a foundation for internal marketing.

4.2.5 Theme 5: Influence on Customer Satisfaction

A smaller set of studies examines the engagement-satisfaction link in explicitly digital contexts. Shin (2022) and Shin et al. (2020) find retained human elements shape satisfaction differentials between digital and traditional South Korean banks; Saunila *et al*. (2019) examine customers' own engagement in digital processes; Le and Tam (2025) and Huy and Tam (2025) link multi-channel service quality and digital transformation to satisfaction and efficiency in Vietnamese banking; Bommisetti *et al*. (2024) propose blockchain-enabled HR metrics for engagement; and Singh *et al*. (2026) show channel-integration shapes satisfaction in omnichannel contexts.

4.2.6 Theme 6: Challenges in Digital Banking

A further cluster foregrounds structural obstacles complicating engagement's translation into satisfaction. Al Issa and Omar (2024) identify leadership, culture, and technostress as constraints on digital innovation; Khan *et al*. (2026) and Syed et al. (2025) document operational and regulatory challenges of deploying blockchain and AI; Kim (2024) links culture and performance to emotional intelligence and leadership in digitalising Vietnamese banks; Abed Alhameed and Emeagwali (2026) show digital transformational leadership enhances agility and performance among Palestinian banks; and Annisa *et al*. (2024) find digital culture, competence, and leadership improve performance in Indonesian state-owned banks, with self-efficacy mediating leadership's effect but not culture and capability.

4.2.7 Theme 7: Future Trends

Only a few studies look forward explicitly. Darwish (2023) situates blockchain and AI within a sustainability-transformation agenda relevant to banking's next phase, while Phan (2025) reframes internal communication as a strategic lever for engagement in distributed, digitally mediated workplaces. The scarcity of forward-looking, empirically grounded contributions is itself notable, discussed further in Section 6.

Discussion

Thematic synthesis of the corpus supports three integrative findings, discussed below against the theoretical foundations in Section 2, the empirical evidence from the reviewed studies, evidence of practical relevance, and this researcher's own interpretive argument.

Finding One: Engagement Influences Satisfaction Through Mediating Mechanisms, Not Direct Transfer

Across Themes 1, 4, and 5, engagement does not translate into satisfaction directly; it operates through service quality, CRM effectiveness, and discretionary staff behaviour.

Theoretical evidence. Social Exchange Theory holds that organisations investing in employees, through empowerment, internal marketing, or authentic leadership, receive discretionary effort in return, which customers experience as service quality (Berraies *et al*., 2020; Rao Muramalla, 2021). The Job Demands-Resources model operationalises engagement as vigour, dedication, and absorption (Bakker & Demerouti, 2008), the reserves from which discretionary behaviour is drawn. The service-profit chain (Heskett *et al*., 1994) supplies the causal ordering from engagement through service value to satisfaction and revenue, while SERVQUAL's reliability, responsiveness, assurance, empathy, and tangibles (Parasuraman *et al*., 1988) specify what "service quality" concretely consists of in this chain.

Empirical evidence. Berraies et al. (2020) find CRM effectiveness mediates empowerment and customer performance in Tunisian banks. Delcourt *et al*. (2017) show technical and emotional competencies interact in emotionally charged encounters. Cain *et al*. (2018) find perceived engagement fortifies the service-profit chain, and Mamboundou and Konan (2025) show in-role and discretionary behaviours predict loyalty in Ivorian banks, a rare data point outside the corpus's dominant Asian base.

Practical evidence. Gumilang *et al*. (2025) and Widjaya et al. (2024) tie CRM-system effectiveness to customer retention in Indonesian digital banking, showing measurable commercial, not only attitudinal, consequences. Rao Muramalla (2021) documents internal-marketing practice in Indian retail banks translating into observable job-satisfaction gains with downstream service implications.

Researcher's argument. The mediated model is theoretically well-specified and empirically recurrent across Tunisia, India, Indonesia, and Côte d'Ivoire, which is a genuine strength. However, nearly every study measures engagement, service quality or CRM effectiveness, and satisfaction concurrently through the same cross-sectional instrument. The literature demonstrates that these constructs co-occur in a pattern consistent with mediation; it has not yet demonstrated that engagement precedes, rather than merely accompanies, the service quality customers report. I would treat the mediation model as the field's best-supported working hypothesis rather than an established causal finding.

Finding Two: Automation Raises the Ceiling on Efficiency but Does Not Lower the Floor Requirement for Engaged Human Judgement

Theme 3 studies do not converge on whether automated channels substitute for or depend on engaged employees; read with Theme 6, automation and engaged human service appear to occupy different, complementary parts of the service encounter.

Theoretical evidence. The Technology Acceptance Model explains chatbot and self-service adoption via perceived usefulness and ease of use but says little about trust. Diffusion of Innovation frames uneven adoption across a population, consistent with the digital-literacy moderation reported below. The expectancy-disconfirmation paradigm (Oliver, 1980) explains why automation failures are disproportionately damaging: an unmet expectation from a channel presumed reliable produces a larger disconfirmation gap than the same failure in a human-staffed channel, which is where engaged staff are theorised to intervene.

Empirical evidence. Widjaja and Legowo (2024) and Singh *et al*. (2025) find chatbots independently generate satisfaction in Indonesian banking; Wikeshani *et al*. (2025) and Swathi *et al*. (2024) argue well-designed tools can feel humanised. Jayamanna *et al*. (2026) find chatbot effectiveness is moderated by digital literacy, and Lissillour and Sahut (2026) argue the promise is overstated relative to persistent trust limitations. Ganguly *et al*. (2025) document semi-urban staff adapting as their role erodes, and Ertiö *et al*. (2024) show technostress erodes engagement unless mitigated by emotionally intelligent leadership.

Practical evidence. Swathi *et al*. (2024) examine an actual generative-AI/WhatsApp-bot deployment, surfacing implementation lessons pure attitude surveys cannot capture. Al Issa and Omar (2024) identify leadership, culture, and technostress as concrete operational constraints on digital innovation in retail banks.

Researcher's argument. Part of Theme 3's apparent disagreement looks like an artefact of what each study measures rather than genuine conflict. Studies finding chatbots independently satisfying typically sample routine, low-emotional-load transactions; studies emphasising engaged staff typically examine complaints or emotionally charged encounters. "Does automation substitute for engaged employees" may be the wrong question; the more useful one, which this corpus has not yet answered, is which service moments each channel suits, and future studies should stratify samples accordingly rather than treating "digital banking satisfaction" as one outcome.

Finding Three: The Evidence Base Is Geographically Concentrated and Theoretically Fragmented

The reviewed relationships are demonstrated more often than theoretically integrated, and the corpus is narrower, geographically and methodologically, than the claims made from it.

Theoretical evidence. As Section 2.4 notes, four frameworks, TPB, TAM, DOI, and Social Exchange Theory, recur across the corpus, but almost no study combines a behavioural-adoption theory with Social Exchange Theory in one model, leaving the technological and relational halves of the phenomenon juxtaposed rather than integrated.

Empirical evidence. The corpus draws mainly on South and Southeast Asia (Pakistan, Indonesia, Sri Lanka, Vietnam), with smaller African, Latin American, European, and East Asian clusters, and is dominated methodologically by cross-sectional PLS-SEM survey designs.

Practical evidence. Where regional outliers exist, they do not always mirror the dominant pattern. Ghimire *et al*. (2023) ground engagement dynamics in Nepalese banking and Mamboundou and Konan (2025) in Côte d'Ivoire; both show that findings from Indonesian or Pakistani banks cannot be assumed to transfer automatically to systems with different labour markets or regulatory regimes without local verification.

Researcher's argument. The geographic concentration likely reflects where research capacity, funding, and rapid digital banking penetration intersect, rather than where the relationship is most consequential. Sub-Saharan Africa's own fast-growing digital banking sector, still thinly represented here, would provide a demanding test of whether Finding One's mediated pathway generalises beyond its current footprint. I would treat the field's conclusions as robust within, but not yet demonstrated beyond, that footprint.

5. Conclusion and Recommendations

This section translates the findings in Section 5 into recommendations for banking practice and for the future research agenda they imply.

Recommendations for Practice

Invest in leadership, not generic engagement programmes. Authentic leadership and middle-manager digital leadership are the most consistent engagement antecedents (Khan & Ghayas, 2022; Li *et al*., 2024); prioritise leadership development, especially among branch and middle managers.

Treat CRM as an amplifier of engaged staff, not a substitute. Since CRM effectiveness mediates empowerment and satisfaction (Berraies *et al*., 2020), integrate frontline staff into CRM design and measurement.

Route by service-moment type. Automate routine, low-emotional-load transactions while reserving engaged human capacity for exceptions and emotionally charged encounters.

Manage technostress proactively. Pair digital rollouts with emotionally intelligent leadership and change-management support, since unmanaged technostress erodes engagement (Ertiö *et al*., 2024).

Strengthen internal communication and empowerment as direct engagement levers (Nadales-Gallego *et al*., 2025; Yeboah & Amankwah, 2025), measured independently of generic annual surveys.

Avoid one-size-fits-all channel strategies where customer digital literacy varies (Jayamanna *et al*., 2026); keep human channels accessible for less digitally able segments.

Recommendations for Future Research

Adopt longitudinal or panel designs to establish causal precedence rather than the co-occurrence current cross-sectional surveys demonstrate.

Build integrated theoretical models combining a behavioural-adoption theory (TAM, DOI, or TPB) with Social Exchange Theory in a single specification.

Diversify geographic coverage, particularly Sub-Saharan Africa, Europe, North America, and the Middle East, to test generalisability beyond South/Southeast Asia.

Disaggregate by service-moment type when assessing automation-engagement substitution, rather than treating "digital banking satisfaction" as one outcome.

Expand methodological range with qualitative and mixed-methods designs capturing employees lived experience alongside the dominant PLS-SEM evidence.

Conclusion

This systematic review synthesised 51 peer-reviewed sources published between 2017 and 2026 to examine how employee engagement influences customer satisfaction in digital banking. The review found engagement operates through identifiable mediating pathways, principally service quality and CRM effectiveness, rather than as a direct driver, and that its contribution persists, and in some respects intensifies, as banking channels digitalise. Seven themes captured this evidence: engagement's multidimensional nature and leadership antecedents; the technological and human determinants of satisfaction; the tension between automated and human service; the mechanisms linking engagement to service quality; direct evidence connecting engagement to satisfaction in digital settings; the structural and cultural challenges digital transformation poses to engagement; and the underdeveloped future-trends literature.

This review's principal contribution is drawing together a literature that has largely developed along separate technological and human-resource tracks, showing the two are empirically and theoretically inseparable in explaining digital banking customer satisfaction. Its main limitation is the geographic and methodological concentration of the evidence base, chiefly cross-sectional survey research from South and Southeast Asian banking systems, which constrains generalisability even as the broader pattern of mediated influence appears robust. Future research pursuing the longitudinal, theoretically integrated, and geographically diversified agenda set out in Section 6 would meaningfully advance understanding of one of digital banking's most consequential, and most human, performance levers.

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