



Transformational Leadership in Digital Banking: A Critical Literature Review of Innovation, Governance, and Pathways to Sustainable Financial Inclusion

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Abstract

Digital transformation expands access to financial services and improves operational efficiency, but it also creates governance, ethical artificial intelligence (AI), and inclusion challenges for financial institutions. Existing research emphasizes technology and regulation, with limited attention to how leadership shapes innovation quality, governance strength, and sustainable financial inclusion outcomes across institutions with similar resources. This study aims to explain how leadership influences digital banking outcomes by critically evaluating and integrating transformational, moral, digital, adaptive, and ethical AI leadership perspectives into a unified framework applicable to governance and inclusion challenges. Using a critical literature review of peer-reviewed studies and institutional sources, the study developed an integrated leadership framework composed of five interdependent dimensions: vision, empowerment, adaptability, ethics, and reflection, and examined their interaction within digital banking ecosystems. The review further finds that existing leadership literature remains conceptually fragmented, with leadership perspectives often examined independently despite their interdependent influence on digital banking outcomes. The study finds that leadership operates as an integrated system rather than discrete traits, with the five dimensions collectively shaping system-level mechanisms that influence innovation, governance, and inclusion outcomes; balanced leadership configurations improve innovation quality while maintaining governance safeguards, whereas imbalances increase systemic risk and exclusion; and institutional factors such as regulatory capacity, technological readiness, and governance structures significantly moderate leadership effectiveness. The Bangko Sentral ng Pilipinas (BSP) case illustrates how coordinated leadership dimensions enable responsible innovation, ethical AI governance, and expanded financial inclusion. This research contributes a structured leadership framework and a diagnostic tool that enables assessment of alignment between digital innovation initiatives, ethical governance requirements, and inclusive access objectives, advancing theory by reconceptualizing transformational leadership as a system-level capability embedded in institutional and regulatory contexts and offering actionable guidance for achieving responsible and inclusive digital finance.

Keywords: digital banking, financial inclusion, governance, innovation, transformational leadership



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INTRODUCTION

The rise of digital banking has transformed the delivery of financial services globally (Osei et al., 2023), enabling financial institutions to leverage cloud systems, application programming interfaces (APIs), and mobile platforms to provide low-cost and accessible services, including payments, credit, savings,

and micro-insurance, particularly in underserved regions (Bakare et al., 2024). While digital transformation enhances financial inclusion, it also introduces complex challenges related to regulatory compliance, cybersecurity risks, data privacy, and algorithmic bias (Wang et al., 2024). These developments reflect an increasingly complex digital banking environment where innovation must be

balanced with governance and ethical responsibility (Ha et al., 2025). As a result, there is a growing need for leadership that can manage uncertainty, promote innovation, and build trust while safeguarding the integrity of financial systems (Lydiana et al., 2025). The Bangko Sentral ng Pilipinas (BSP) provides a relevant institutional example of how leadership can align digital innovation with risk management and inclusion objectives within a structured regulatory framework.

Despite rapid technological progress, a critical gap remains between the adoption of digital technologies and the leadership capabilities required to effectively govern and sustain these transformations. Existing research has largely focused on technological infrastructures and regulatory frameworks, such as payment modernization, open banking, and cybersecurity, while giving limited attention to how leadership practices shape innovation quality, governance effectiveness, and sustainable financial inclusion outcomes (Probojakti et al., 2024; Klus & Müller, 2021). This limitation constrains both theoretical understanding and practical application, particularly in explaining variations in outcomes among institutions with comparable technological resources. Furthermore, the role of institutional conditions, such as regulatory capacity, technological readiness, and governance structures, in shaping leadership effectiveness remains insufficiently integrated within current studies, despite their importance in digital finance ecosystems. To address this gap, this study adopts a critical literature review to integrate transformational leadership theory with emerging perspectives on digital, adaptive, and ethical AI leadership. Transformational leadership, grounded in the works of Burns and Bass, emphasizes vision, organizational change, and ethical influence (Lu, 2025; Probojakti et al., 2024). This theoretical foundation is extended by digital leadership, which incorporates technological literacy and data-driven decision-making (Klus & Müller, 2021), adaptive leadership, which highlights flexibility and continuous learning in dynamic environments (Juliana et al., 2023), and ethical

AI leadership, which emphasizes accountability, transparency, fairness, and data governance in AI systems (Papagiannidis et al., 2025).

Building on these perspectives, the study develops an integrated leadership framework consisting of five interdependent dimensions, namely vision, empowerment, adaptability, ethics, and reflection, that collectively explain how leadership influences digital banking outcomes. Consistent with the study's theoretical contribution, leadership is conceptualized as a system-level capability embedded within institutional and regulatory contexts, where internal leadership practices interact with external conditions such as regulatory environments, technological infrastructures, and governance arrangements. Accordingly, this study is guided by three interrelated objectives. First, it synthesizes existing literature on transformational, digital, and adaptive leadership in digital banking ecosystems to understand how these approaches are applied in practice. Second, it examines how leadership dimensions influence key outcomes, namely innovation, governance, and sustainable financial inclusion, by analyzing the effects of leadership practices within digital banking environments. Third, it analyzes how institutional conditions, including regulatory capacity, technological readiness, and governance structures, shape and moderate leadership effectiveness and digital banking outcomes.

The study is guided by the following research questions:

1. How are transformational, digital, and adaptive leadership approaches applied within digital banking ecosystems?
2. What is the effect of leadership practices on innovation, governance, and sustainable financial inclusion outcomes?
3. How do institutional conditions moderate leadership effectiveness and digital banking outcomes?

In addressing the research questions, the study aims to develop a comprehensive and theory-informed understanding of leadership in digital banking, demonstrating how integrated leadership capabilities can be leveraged to achieve responsible innovation, effective governance, and inclusive financial systems.

LITERATURE REVIEW

Existing research shows that the digital revolution has caused deep changes to the entire banking industry. The changes that now define banking operations bring three main benefits. The implementation of cloud computing, APIs, and mobile platforms leads to faster service delivery, improved access to financial products, and operational efficiency (Osei et al., 2023; Bakare et al., 2024). The transformation creates two outcomes which lead to higher financial inclusion and faster innovation. The literature shows that organizations encounter new obstacles, including cybersecurity risks, complex regulatory requirements, ethical challenges, and algorithmic bias in data-driven systems (Wang et al., 2024; Ha et al., 2025). While these studies provide strong insights into technological and regulatory developments, they remain predominantly descriptive and technology-focused, with limited attention to the role of leadership in mediating the tensions between innovation, governance, and inclusion. This gap highlights the need to examine leadership not merely as a supporting factor but as a central mechanism influencing digital transformation outcomes.

Transformational and Moral Leadership Foundations. The transformational leadership theory offers a baseline viewpoint to examine leadership dynamics in digital banking. Grounded in Burns' moral leadership and Bass' transformational leadership theories, transformational leadership emphasizes the capacity of leaders to inspire vision, enable change, and act ethically (Probojakti et al., 2024; Lu, 2025). Bass conceptualizes transformational leadership through four dimensions, idealized influence, inspirational

motivation, intellectual stimulation, and individualized consideration, which enable leaders to navigate complex organizational environments (Klus & Müller, 2021). A key strength of transformational leadership lies in its ability to align organizational vision with employee motivation and ethical influence, making it particularly relevant in periods of disruptive change. However, its primary limitation is that it largely focuses on leader-follower relationships and internal organizational dynamics, with less emphasis on technological complexity, data-driven decision-making, and external governance structures that characterize modern digital banking ecosystems. Consequently, while transformational leadership provides a strong normative and motivational foundation, it is insufficient on its own to address the systemic and technology-intensive challenges of digital finance, thereby necessitating complementary perspectives.

Digital and Adaptive Leadership in Dynamic Environments. The process of developing innovative ideas through traditional methods shows how digitization creates new business opportunities (Klus & Müller, 2021). Digital banking leaders need to develop new skills because they must learn about emerging technologies while handling their integration with banks, financial technology companies, and regulatory bodies. Digital leadership incorporates skills in terms of technological literacy, coordination via platforms, and using data for making strategic decisions. Adaptive leadership complements this perspective by emphasizing flexibility, continuous learning, and responsiveness to rapidly changing environments (Juliana et al., 2023). Adaptive leadership frameworks highlight leaders' abilities to make iterative decisions, manage risk, and build organizational resilience in volatile technological and market conditions. The strength of digital leadership lies in its focus on technology integration and data utilization, which are critical in digital banking contexts. Meanwhile, adaptive leadership provides a dynamic capability for responding to uncertainty and complexity. However, both

perspectives exhibit limitations. Digital leadership often prioritizes technological efficiency over ethical and governance considerations, while adaptive leadership emphasizes flexibility but may lack normative guidance for ensuring accountability, fairness, and long-term sustainability. Moreover, existing studies tend to treat digital and adaptive leadership as independent constructs, limiting the ability to explain how these capabilities interact within broader institutional and regulatory systems. This fragmentation constrains the development of holistic models that reflect the interconnected nature of leadership in digital banking ecosystems.

Ethical AI Leadership and Governance. In banking, the integration of AI and data-driven systems presents new governance and ethical challenges that require strong leadership oversight. Ethical AI leadership frameworks emphasize accountability, transparency, fairness, privacy, and explainability in algorithmic decision-making processes (Papagiannidis et al., 2025). These frameworks aim to address risks such as data misuse, algorithmic bias, and lack of transparency (Wang et al., 2024). Scholars argue that ethical leadership extends beyond individual behavior to include institutional governance systems that ensure responsible innovation and stakeholder protection (Papagiannidis et al., 2025). The primary strength of ethical AI leadership lies in its ability to embed governance, trust, and fairness into digital systems, which are essential for sustainable financial inclusion. However, its limitation is that it often operates as a set of normative principles without fully specifying how organizations can balance ethical requirements with innovation and operational efficiency in practice. Additionally, ethical frameworks are frequently applied in isolation from strategic and adaptive leadership processes, reducing their effectiveness in dynamic digital environments. This suggests that ethical AI leadership must be integrated with other leadership approaches to ensure that ethical principles are not only defined but operationalized within innovation-driven systems.

Integrated Leadership Dimensions in Digital Banking. Recent studies suggest that effective leadership in digital banking requires a multi-dimensional approach that combines traditional and emerging leadership perspectives. Building on this view, the literature identifies five interacting leadership dimensions: vision, empowerment, adaptability, ethics, and reflection (Klus & Müller, 2021; Lydiana et al., 2025; Hariyani et al., 2025). Vision provides strategic direction; empowerment enables distributed innovation; adaptability supports responsiveness to environmental changes; ethics ensures responsible decision-making; and reflection facilitates continuous learning and long-term sustainability. A key strength of this multidimensional perspective is its ability to capture the complementary roles of different leadership capabilities. However, much of the existing research treats these dimensions as discrete or parallel attributes rather than as interdependent elements of a unified system. As a result, there is limited understanding of how these dimensions interact to generate outcomes such as innovation quality, governance effectiveness, and financial inclusion. Furthermore, existing studies rarely consider how institutional conditions, such as regulatory capacity, governance structures, and technological readiness, shape the effectiveness of these leadership dimensions, despite their critical role in digital finance ecosystems.

Synthesis and Research Gap. Through a critical evaluation of existing leadership perspectives, the review reveals that each approach provides valuable but partial insights into leadership in digital banking. Transformational leadership offers strong normative and motivational foundations but lacks technological and systemic depth; digital and adaptive leadership address complexity and innovation but may underemphasize ethics and governance; and ethical AI leadership ensures accountability but often lacks operational integration with innovation processes. These limitations highlight a key gap: existing theories are fragmented and insufficient when applied independently to the complex, technology-

driven, and institutionally embedded nature of digital banking. There is a lack of integrative frameworks that explain how multiple leadership dimensions interact within organizational and regulatory systems to simultaneously achieve innovation, governance, and inclusive outcomes. Accordingly, this study argues for the necessity of an integrated leadership framework that synthesizes transformational, digital, adaptive, and ethical AI leadership perspectives. Such integration enables a system-level understanding of leadership, where interdependent dimensions collectively shape outcomes through dynamic interactions within institutional contexts. By addressing this gap, the study advances a more comprehensive explanation of how leadership influences digital banking ecosystems and supports responsible and sustainable financial inclusion.

Conceptual Framework. Building on the preceding critical evaluation and synthesis of the literature, this study advances an integrated conceptual framework that explains how leadership shapes digital banking outcomes through interdependent dimensions and system-level processes. Hence, leadership is conceptualized as a system-level capability embedded within organizational and institutional contexts rather than as a set of discrete leader traits. Figure 1 below shows the proposed framework, illustrating the directional relationships among leadership dimensions, mediating mechanisms, and digital banking outcomes, as well as the moderating role of institutional conditions.

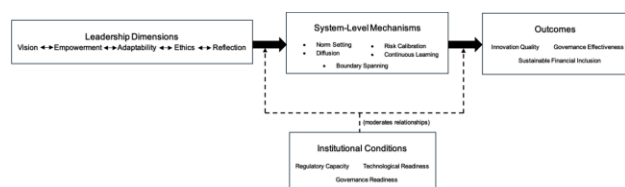


Figure 1
Integrated Leadership Framework for Digital Banking

The framework is structured around five interdependent leadership dimensions, vision, empowerment, adaptability, ethics, and reflection, which collectively guide how

organizations navigate digital transformation. Rather than functioning independently, these dimensions operate as a mutually reinforcing system, where the effectiveness of each dimension depends on its interaction with the others. This configuration reflects the multi-dimensional nature of leadership in digital environments (Klus & Müller, 2021; Lydiana et al., 2025; Hariyani et al., 2025). The framework proposes that these leadership dimensions influence outcomes indirectly through system-level mechanisms, which serve as the primary pathways through which leadership is translated into organizational and sectoral effects. These mechanisms include norm setting, diffusion, boundary spanning, risk calibration, and continuous learning. Collectively, they represent the processes through which leadership shapes both innovation and governance in digital finance ecosystems (Organization for Economic Co-operation and Development [OECD], 2023a; Wang et al., 2024). In this structure, leadership dimensions are the drivers, mechanisms are the transmission processes, and outcomes are the resulting effects.

Through these mechanisms, leadership influences three core outcomes: innovation quality, governance effectiveness, and sustainable financial inclusion. These outcomes reflect the central tensions identified in the literature, namely, the need to simultaneously promote technological innovation, ensure regulatory and ethical integrity, and expand equitable access to financial services (Bakare et al., 2024; Ha et al., 2025; Antonio & Magante, 2023). Crucially, the framework incorporates institutional conditions as moderating factors that shape the strength and direction of these relationships. Regulatory capacity, technological readiness, and governance structures influence how leadership dimensions are enacted and how effectively mechanisms operate. This moderating layer reflects the reality that leadership outcomes in digital banking are not solely determined by internal capabilities but are contingent on broader institutional environments (OECD, 2023a; BSP, 2021). Overall, the framework

conceptualizes leadership as a mediating system-level capability that operates through structured mechanisms within institutional contexts, linking digital transformation processes to outcomes in innovation, governance, and financial inclusion.

METHODS

Design. This study adopted a critical literature review to examine how leadership influences digital banking outcomes. The review focused on critically evaluating, comparing, and integrating existing theoretical and empirical literature on leadership, digital transformation, governance, and financial inclusion. A critical literature review was appropriate for evaluating, synthesizing, and integrating diverse theoretical perspectives and interdisciplinary evidence. This approach enabled the identification of conceptual strengths, limitations, theoretical fragmentation, and research gaps across the literature, thereby supporting the development of an integrated leadership framework (Snyder, 2019). Consistent with established methodological guidance, the study extended beyond descriptive synthesis by critically examining conceptual assumptions, theoretical inconsistencies, areas of fragmentation, and limitations across leadership perspectives. The review sought not only to summarize existing knowledge but also to identify gaps and tensions within the literature, thereby facilitating the development of a more integrated explanatory framework for leadership in digital banking. Grant and Booth (2009) provide a framework for classifying types of literature reviews, while Ferrari (2015) outlines approaches for ensuring transparency and scholarly clarity. The analysis was guided by reflexive thematic analysis (Braun & Clarke, 2006; 2019), including familiarization with data, coding, theme development, refinement, and reporting. To ensure methodological transparency, the review followed a systematic stepwise screening and selection process, enabling a clear progression from source identification to final inclusion. The thematic synthesis approach was applied to analyze

leadership in relation to digital banking outcomes within complex institutional environments.

Search Strategy and Source Selection. The review incorporated both academic and institutional sources to ensure breadth and contextual relevance. In addition to peer-reviewed journal articles retrieved from scholarly databases, institutional evidence was obtained from BSP publications and reports issued by international organizations (BSP, 2020; BSP, 2021; BSP, 2022; United Nations, 2022; OECD, 2023a). A purposive sampling strategy was employed to select sources that were both theoretically relevant and contextually grounded. Academic literature was retrieved from Scopus, Web of Science Core Collection, IEEE Xplore, and Google Scholar, while institutional materials were obtained from the BSP repository and official publications of international organizations. Search queries were conducted using structured Boolean combinations of key terms, including “transformational leadership,” “digital leadership,” “adaptive leadership,” “digital banking,” “fintech,” “financial inclusion,” and “AI governance.” Forward and backward citation tracking were also applied to identify additional relevant sources.

The screening and selection process was conducted in a stepwise manner. First, an initial search yielded 312 records. After removing duplicate entries, 244 records remained. Second, titles and abstracts were screened, resulting in 71 articles retained for full-text review. Third, full-text assessment was conducted using predefined inclusion and exclusion criteria, leading to a final sample of 41 sources. This stepwise filtering process ensured transparency in how the dataset was derived and supported the credibility of the review. The source identification, screening, and selection procedures are summarized in Figure 2. While purposive sampling enabled the selection of high-quality and contextually relevant sources, it may have introduced selection bias. To mitigate this limitation, the study triangulated data across multiple

databases and incorporated both academic and institutional sources, thereby enhancing diversity and reducing the risk of systematic bias.

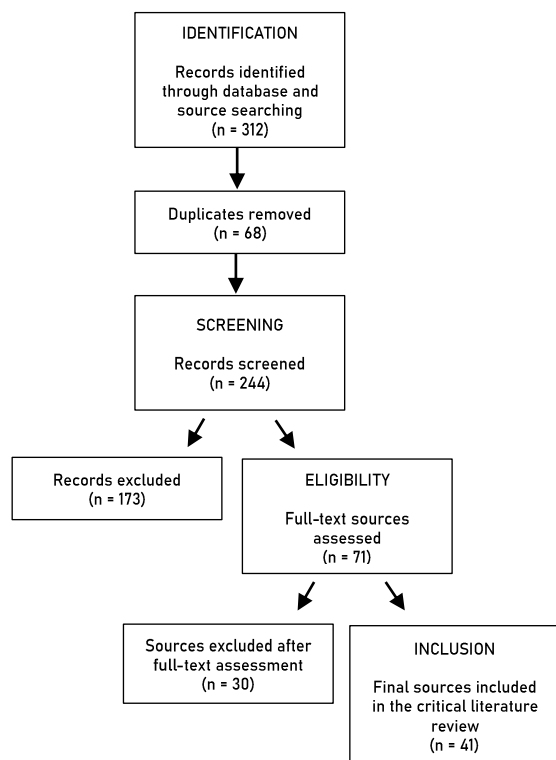


Figure 2
Literature Search, Screening, and Selection Process

Only sources published between 2021 and 2025 were included to capture recent developments in digital finance, with the exception of foundational theoretical and methodological references. This ensured both contemporary relevance and conceptual grounding.

Eligibility Criteria. Sources were screened using predefined inclusion and exclusion criteria to ensure relevance and methodological consistency. Table 1 presents the eligibility criteria applied in the selection of literature sources.

Table 1
Eligibility Criteria Applied in the Selection of Literature Sources

Criterion	Inclusion	Exclusion
Topic	Leadership in digital banking, governance, financial inclusion, digital transformation	Studies unrelated to leadership or digital transformation
Source Type	Peer-reviewed articles, BSP publications, OECD/UN reports, institutional documents	Editorials, blogs, opinion articles, non-scholarly commentary

Relevance	Directly addresses research objectives and questions	Limited or no relevance to study objectives
Accessibility	Full-text available	Full-text not accessible
Contribution	Provides conceptual, theoretical, empirical, or policy insights	Insufficient information for critical evaluation

Data Extraction and Critical Evaluation. The study employed a structured data extraction and thematic coding framework to systematically analyze selected sources. The extraction template captured key variables, including leadership dimensions, system-level mechanisms, governance practices, and financial inclusion outcomes, ensuring consistency and comparability across studies. The coding framework was grounded in transformational leadership theory (Probojakti et al., 2024; Lu, 2025), complemented by digital leadership (Klus & Müller, 2021), adaptive leadership (Juliana et al., 2023), and ethical AI leadership perspectives (Papagiannidis et al., 2025; Wang et al., 2024).

Based on these theoretical foundations, five analytical dimensions were operationalized: vision, empowerment, adaptability, ethics, and reflection (Klus & Müller, 2021; Lydiana et al., 2025; Hariyani et al., 2025). These dimensions served as the primary categories for coding and thematic organization. To ensure analytical reliability and validity, the coding process involved iterative refinement and constant comparison across sources. Codes were repeatedly reviewed and adjusted to maintain conceptual consistency with theoretical constructs. Themes were validated through cross-referencing with original source material and supporting literature, thereby strengthening internal coherence and reducing subjectivity in interpretation. This structured data extraction and critical evaluation framework enabled the systematic examination of how leadership dimensions activated system-level mechanisms and influenced innovation, governance, and financial inclusion outcomes.

Data Analysis. The study applied reflexive thematic analysis (Braun & Clarke, 2006; 2019) to examine relationships between leadership and digital banking outcomes. The analysis began with a comprehensive review of selected

sources to achieve data familiarization and identify initial patterns. Open coding was then conducted to capture relevant concepts and relationships. A combined inductive and deductive approach was applied: inductive coding allowed themes to emerge from the data, while deductive coding ascertained consistency with established leadership theories (Klus & Müller, 2021; Juliana et al., 2023; Papagiannidis et al., 2025). Codes were organized into predefined analytical categories and refined through iterative comparison to ensure coherence and conceptual clarity. Analytical rigor was strengthened through triangulation across academic, policy, and institutional sources, enabling validation of findings from multiple perspectives (United Nations, 2022; BSP, 2023). In addition, repeated verification of coded data against original sources ensured consistency and reliability of interpretations. The final stage involved cross-dimensional synthesis to examine how leadership practices interact and influence digital banking outcomes, consistent with the study's integrated conceptual framework.

RESULTS

RQ1. Application of Transformational, Digital, and Adaptive Leadership in Digital Banking Ecosystems

For RQ1, the review indicates that transformational, digital, and adaptive leadership approaches are applied in digital banking through interconnected mechanisms involving strategic vision, structured empowerment, and organizational adaptability. Across the reviewed studies, leadership is consistently associated with the capacity to guide digital transformation, mobilize organizational resources, manage uncertainty, and support innovation within increasingly complex technological and regulatory environments.

Vision and Inspirational Motivation in Digital Banking. Across the reviewed literature, vision emerges as a central leadership dimension guiding digital banking transformation. Rather

than operating merely as a motivational construct, vision functions as a strategic alignment mechanism, shaping resource allocation, organizational direction, and preparedness for digital change (Juliana et al., 2023; Gun et al., 2024). The synthesis indicates that vision contributes to innovation outcomes primarily through coordination and mobilization effects. However, its effectiveness is contingent on institutional conditions, particularly the presence of governance structures and operational pathways. Several studies highlight that vision alone is insufficient when not supported by clearly defined implementation processes and equity-sensitive measures. Without these, digital initiatives risk reinforcing structural gaps related to infrastructure, literacy, and affordability. Overall, the findings suggest that vision is necessary but not sufficient, requiring alignment with governance and inclusion mechanisms to produce balanced digital banking outcomes.

Empowerment and Adaptive Frameworks for Innovation. Empowerment in digital banking is consistently framed as a controlled and structured process rather than unrestricted delegation, operating within defined governance boundaries (Klus & Müller, 2021; Lydiana et al., 2025). The findings indicate that empowerment facilitates innovation primarily through risk-managed autonomy, enabling experimentation while maintaining institutional oversight. At the same time, the literature identifies key risks when empowerment is not properly calibrated, including operational failure, consumer harm, and model bias. These risks highlight the importance of supervisory mechanisms, such as reporting structures and escalation procedures, which mediate the relationship between empowerment and innovation outcomes. Furthermore, regulators are increasingly positioned as boundary-spanning actors, balancing innovation and system stability (Gun et al., 2024; Juliana et al., 2023). This reinforces the view that empowerment contributes to financial inclusion only when embedded within structured accountability and governance systems.

Adaptability and Resilience in Digital Transformation. Adaptability is identified as a core leadership capability that enables organizations to respond to dynamic technological, regulatory, and market conditions (Probojakti et al., 2024; Hariyani et al., 2025). The findings suggest that adaptability operates both as a reactive and proactive mechanism, supporting real-time responses to disruption while enabling anticipatory adjustments in digital transformation strategies. However, the effectiveness of adaptability varies significantly across institutional contexts. Differences in technological readiness, regulatory capacity, and resource availability shape the speed and scope of adaptive responses. Digitally mature institutions demonstrate higher adaptive efficiency, while less-resourced organizations face structural constraints that limit their responsiveness. These disparities have important implications, as limited adaptability may lead to exclusion from digital ecosystems, reduced competitiveness, and organizational vulnerability. Accordingly, adaptability is best understood as a context-dependent capability shaped by institutional conditions.

Taken together, the findings suggest that transformational, digital, and adaptive leadership approaches operate as complementary rather than isolated capabilities. Collectively, these approaches support strategic alignment, innovation, and organizational responsiveness in digital banking environments. However, the review also indicates that existing leadership literature remains conceptually fragmented, as studies frequently examine these leadership perspectives independently rather than as interacting dimensions within a broader leadership system.

RQ2. Leadership Effects on Innovation, Governance, and Sustainable Financial Inclusion

For RQ2, the findings suggest that leadership practices significantly influence innovation quality, governance effectiveness, and

sustainable financial inclusion outcomes. Across the reviewed literature, leadership affects these outcomes through interconnected mechanisms involving strategic alignment, ethical oversight, organizational learning, and risk-managed innovation. Rather than influencing outcomes directly, leadership operates through system-level processes that shape how innovation, governance, and inclusion objectives are balanced within digital banking ecosystems.

Innovation Outcomes of Leadership Practices.

Across the reviewed studies, leadership contributes to innovation by enabling strategic coordination, experimentation, and organizational responsiveness. Vision, empowerment, and adaptability facilitate the implementation of digital initiatives by aligning resources with organizational objectives and supporting risk-managed innovation. The evidence suggests that leadership influences innovation quality not only through encouragement of technological adoption but also through the establishment of conditions that enable learning, adaptation, and continuous improvement. Consequently, innovation outcomes are strengthened when leadership dimensions operate in a coordinated manner rather than as isolated capabilities (Klus & Müller, 2021; Juliana et al., 2023; Probojakti et al., 2024).

Ethical Leadership and Governance in Technology-Enabled Finance.

Ethical leadership plays a critical role in ensuring that digital banking systems operate in a transparent, accountable, and equitable manner. Prior studies emphasize key governance principles, including transparency, fairness, accountability, data privacy, and cybersecurity, as essential components of ethical AI and digital finance systems (Papagiannidis et al., 2025; Wang et al., 2024). The findings extend this perspective by showing that ethical leadership operates as a system-level governance mechanism rather than an individual attribute. Effective implementation requires not only technical safeguards but also institutionalized processes, regulatory

oversight, and organizational accountability structures. Moreover, ethical leadership functions across multiple levels, including individual decision-making and broader governance systems. This multi-level nature enables ethical leadership to support both governance effectiveness and inclusive financial outcomes by mitigating risks associated with data-driven technologies.

Reflection and Sustainability in Leadership Outcomes. Reflection is identified as a critical leadership capability that supports continuous learning, evaluation, and long-term sustainability in digital banking (Hariyani et al., 2025; Lin, 2025). Rather than a passive process, reflection functions as an active feedback mechanism that informs strategic adjustments and operational improvements. The synthesis indicates that reflective practices enable organizations to assess both anticipated and unintended outcomes of digital initiatives. This capability is particularly important in aligning innovation with governance and inclusion objectives, as it supports ongoing assessment of access, risk, and performance dimensions. Organizations that institutionalize reflective processes are better positioned to sustain innovation while maintaining ethical and inclusive practices over time.

Taken together, the findings indicate that leadership practices influence innovation, governance, and sustainable financial inclusion through interconnected rather than independent mechanisms. Leadership contributes to innovation by enabling coordination, experimentation, and organizational responsiveness; to governance by embedding accountability, transparency, and ethical safeguards; and to financial inclusion by aligning technological advancement with equitable access objectives. However, evidence remains mixed regarding the relative importance of leadership versus technological infrastructure and institutional support, suggesting that successful digital banking outcomes depend on the interaction of leadership capabilities and broader organizational conditions. Existing literature

also tends to examine innovation, governance, and inclusion separately, limiting understanding of how these outcomes interact within digital banking ecosystems.

RQ3. Moderating Role of Institutional Conditions in Leadership Effectiveness and Digital Banking Outcomes

For RQ3, the findings indicate that institutional conditions significantly moderate leadership effectiveness and digital banking outcomes. Across the reviewed studies, factors such as regulatory capacity, technological readiness, governance structures, and resource availability influence how leadership capabilities are translated into innovation, governance, and financial inclusion outcomes. The review suggests that leadership effectiveness cannot be fully understood independently of the institutional environments within which digital transformation occurs.

Institutional Conditions and Leadership Effectiveness. Across the reviewed literature, institutional environments shape how leadership capabilities are translated into digital banking outcomes. Several studies indicate that vision contributes to innovation outcomes through coordination and mobilization effects; however, its effectiveness is contingent on the presence of governance structures and operational pathways.

Consistent with the findings for RQ1, adaptability is strongly influenced by institutional conditions. Across the reviewed studies, technological readiness, regulatory capacity, and resource availability shape the extent to which adaptive leadership capabilities can be translated into effective digital transformation outcomes. Institutions with stronger digital infrastructures demonstrate greater adaptive capacity, whereas resource-constrained environments face higher risks of exclusion and reduced responsiveness.

Governance Structures and Regulatory Capacity as Moderators. The reviewed studies further indicate that governance structures and

regulatory capacity moderate how leadership practices influence innovation and inclusion outcomes. Evidence from the ethical leadership literature suggests that accountability systems, regulatory oversight, and organizational governance mechanisms strengthen the effectiveness of leadership initiatives in digital banking environments.

While leadership literature frequently emphasizes leader capabilities and organizational vision, the evidence suggests that leadership outcomes depend heavily on the institutional environments in which leadership is exercised. The findings therefore challenge assumptions that leadership alone is sufficient to produce successful digital transformation outcomes.

Critical Position on Institutional Moderation. Existing leadership literature frequently treats leadership capabilities as primary drivers of innovation and transformation. However, the evidence reviewed suggests that such perspectives may underestimate the importance of institutional conditions. While some studies emphasize transformational and digital leadership as key determinants of organizational success (Klus & Müller, 2021; Probojakti et al., 2024), others demonstrate that leadership effectiveness is constrained by governance quality, technological infrastructure, and regulatory readiness (Wang et al., 2024; OECD, 2023a). Consequently, evidence remains inconsistent regarding whether leadership capabilities alone can explain digital banking outcomes. The review therefore argues that leadership and institutional conditions should be examined as interdependent rather than separate explanatory factors.

Taken together, the findings indicate that institutional conditions are not merely contextual factors but active moderators of leadership effectiveness. Regulatory capacity, technological readiness, governance structures, and resource availability influence the extent to which leadership capabilities are translated into innovation, governance, and

financial inclusion outcomes. The review therefore suggests that successful digital banking transformation emerges from the interaction between leadership capabilities and institutional environments rather than from leadership practices alone.

Integrated Synthesis Across Research Questions. The findings indicate that the five leadership dimensions: vision, empowerment, adaptability, ethics, and reflection, operate as an interdependent system rather than as discrete capabilities. Each dimension contributes to digital banking outcomes through distinct but interconnected pathways, consistent with the study's conceptual framework. Cross-dimensional analysis highlights that leadership effectiveness is mediated by system-level mechanisms, such as risk calibration, norm setting, and diffusion, and moderated by institutional conditions, including regulatory capacity and technological readiness.

Moreover, the analysis reveals persistent tensions between innovation, governance, and inclusion. These tensions are not resolved by individual leadership dimensions alone but require coordinated interaction among multiple capabilities within supportive institutional environments. Table 2 summarizes how leadership dimensions are operationalized in institutional contexts and how they influence innovation, governance, and financial inclusion outcomes.

Table 2
Summary of Findings on Leadership Dimensions in Digital Banking

Leadership Dimension	Literature Insights (Past Findings)	BSP Illustrative Case	Impact on Digital Banking
Vision	Leaders articulated compelling futures; inspired shared motivation and strategic alignment.	Digital Payments Transformation Roadmap	Mobilized industry-wide stakeholders toward ambitious digitalization and financial inclusion goals.
Empowerment	Delegation, creativity, and innovation were fostered through autonomy and supportive structures.	Regulatory Sandbox Framework	Enabled fintech experimentation in a controlled environment while maintaining systemic safeguards.
Adaptability	Leaders adjusted strategies in response to disruption, ensuring organizational agility.	Shift toward Open Finance ecosystems	Ensured responsiveness to evolving global and local market trends through phased, context-sensitive implementation.
Ethics	Emphasis was placed on moral responsibility, fairness, transparency, and data governance.	Open Finance Framework	Reinforced trust by protecting consumer rights, data privacy, and security in digital financial services.
Reflection	Iterative review, learning, and sustainability alignment were consistently practiced.	Financial Stability Report	Sustained long-term inclusion and system resilience through continuous risk assessment and policy refinement.

Overall, the findings across RQ1, RQ2, and RQ3 reinforce the conceptualization of leadership as a system-level capability in which vision, empowerment, adaptability, ethics, and reflection interact to influence innovation, governance, and financial inclusion outcomes. The present review therefore supports an integrated leadership perspective that emphasizes the interaction between leadership dimensions and institutional conditions in shaping digital banking transformation.

DISCUSSION

Strategic Leadership Capabilities in Digital Banking Transformation. The findings related to the application of transformational, digital, and adaptive leadership approaches indicate that effective digital banking transformation depends on the interaction of strategic vision, structured empowerment, and adaptive capacity. Rather than operating as isolated leadership styles, these approaches function as complementary capabilities that support organizational responsiveness, innovation, and adaptation within complex digital banking environments.

Vision as Strategic Alignment Mechanism. Findings confirm that vision operates not only as an inspirational force but as a strategic alignment mechanism that directs organizational priorities, resource allocation, and digital transformation trajectories. This supports transformational leadership theory, which emphasizes shared vision as a driver of organizational change (Klus & Müller, 2021). Extending prior studies, the results indicate that vision contributes to digital banking outcomes primarily through coordination and mobilization processes, shaping technological readiness and institutional direction (Gun et al., 2024). At the institutional level, BSP's Digital Payments Transformation Roadmap demonstrates how vision is translated into policy frameworks that align digital innovation with national financial inclusion goals (BSP, 2020; Antonio & Magante, 2023). This reinforces findings that vision alone is insufficient without governance support, suggesting that its effectiveness depends on

the integration of strategic intent with institutional arrangements that enable inclusive outcomes.

Empowerment as Regulated Innovation Mechanism. The findings indicate that empowerment functions as a structured and risk-calibrated mechanism enabling innovation within institutional boundaries, rather than as unrestricted autonomy (Lydiana et al., 2025). The BSP Regulatory Sandbox illustrates this approach, where innovation is facilitated through controlled experimentation and regulatory oversight, balancing flexibility with financial stability. This indicates that empowerment activates mechanisms such as risk calibration and boundary spanning. At the same time, evidence suggests that poorly governed empowerment may reinforce exclusion, particularly in digitally underserved populations (Velez, 2025; United Nations, 2022). This highlights that empowerment contributes to innovation and inclusion only when embedded within accountability structures and coordinated regulatory systems, reinforcing the role of institutional conditions as moderators. Thus, empowerment is better understood as a governance-enabled system capability rather than an isolated leadership behavior.

Adaptability and Contextual Constraints. Adaptability emerges as a critical leadership capability that supports both reactive responses to disruption and proactive alignment with emerging technological and regulatory landscapes, in line with adaptive leadership theory (Juliana et al., 2023; Probojakti et al., 2024). However, the findings demonstrate that adaptability is unevenly distributed across institutions, as it depends on technological readiness, regulatory capacity, and resource availability (Wang et al., 2024). The BSP's transition toward Open Finance illustrates how anticipatory adaptability facilitates alignment between regulatory frameworks and rapidly evolving digital ecosystems (BSP, 2021; OECD, 2023b). These differences highlight the moderating role of institutional conditions, showing that adaptability is not only a leadership trait but

also a structurally conditioned capability. This extends adaptive leadership theory by demonstrating that organizational responsiveness and resilience are shaped by broader institutional contexts, with implications for inclusion, competitiveness, and sustainability in digital banking.

Leadership Contributions to Innovation, Governance, and Inclusion. The findings concerning innovation, governance, and sustainable financial inclusion demonstrate that leadership operates through interconnected mechanisms that balance technological advancement with accountability, ethical oversight, and organizational learning. These findings suggest that innovation, governance, and inclusion are mutually reinforcing outcomes rather than independent dimensions of digital banking transformation.

Ethical Leadership as System-Level Governance. The findings reinforce that ethical leadership plays a central role in ensuring transparency, accountability, and fairness in AI-driven financial systems, consistent with prior literature (Papagiannidis et al., 2025; Wang et al., 2024). The analysis extends these insights by demonstrating that ethical leadership operates as a system-level governance function, requiring integration of technical safeguards with institutional oversight mechanisms. The BSP Open Finance Framework provides an example of how ethical principles are operationalized through consumer protection, data governance, and accountable information-sharing processes (OECD, 2023a; BSP, 2021). However, challenges such as algorithmic bias and unequal access remain significant (Ha et al., 2025). This emphasizes that ethical leadership must operate across multiple levels, requiring coordination among regulators, financial institutions, and civil society to ensure equitable outcomes (United Nations, 2022). Thus, ethical leadership connects governance effectiveness with inclusive digital finance and underscores the importance of institutionalized safeguards in technology-enabled systems.

Reflection as a Mechanism for Sustainability. Reflection is identified as a key capability supporting continuous learning, evaluation, and long-term sustainability in digital banking systems, consistent with earlier findings (Hariyani et al., 2025; Lin, 2025). The BSP Financial Stability Report demonstrates how reflective practices are embedded in governance through continuous monitoring, risk assessment, and iterative policy adjustment (Financial Stability Coordination Council, 2024). This positions reflection as an institutional feedback mechanism rather than solely an individual cognitive practice, linking evaluation processes with governance effectiveness and inclusive outcomes. Through this mechanism, organizations can assess both anticipated and unintended impacts of digital transformation initiatives, thereby aligning short-term innovation with long-term sustainability goals.

Institutional Context as a Determinant of Leadership Effectiveness. The findings further demonstrate that leadership effectiveness is contingent upon institutional conditions. Regulatory capacity, technological readiness, governance quality, and organizational resources significantly influence how leadership capabilities are translated into digital banking outcomes. As a result, leadership effectiveness cannot be fully understood independently of the institutional environments within which digital transformation occurs.

Cross-Dimensional Dynamics and System-Level Integration. Taken together, the findings demonstrate that leadership dimensions: vision, empowerment, adaptability, ethics, and reflection, operate as an interdependent system rather than as isolated capabilities, consistent with the conceptual framework. Vision provides strategic direction, empowerment enables innovation, adaptability ensures responsiveness, ethics establishes governance, and reflection supports continuous evaluation. These dimensions interact through system-level mechanisms such as coordination, risk calibration, and learning, while their

effectiveness is shaped by institutional conditions including regulatory capacity and technological readiness. This reinforces the argument developed that leadership in digital banking is best understood as a dynamic, integrated system embedded within institutional environments, rather than as a set of discrete competencies.

Critical Reflection on Existing Leadership Literature. The review highlights a persistent limitation within the leadership literature. Transformational, digital, adaptive, and ethical leadership perspectives are frequently examined as independent constructs despite evidence that digital banking outcomes emerge from their interaction. While some studies emphasize leadership capabilities as primary drivers of innovation and transformation, others suggest that institutional conditions significantly constrain leadership effectiveness. This conceptual fragmentation may limit the explanatory power of existing frameworks and contribute to inconsistent findings regarding innovation, governance, and financial inclusion outcomes. The present review therefore argues for a more integrated perspective that recognizes the interdependence of leadership dimensions and institutional contexts.

Theoretical Implications. From a theoretical perspective, this study contributes to leadership and digital banking literature by reconceptualizing leadership as a system-level capability embedded within institutional and governance structures. The findings extend transformational leadership by showing how vision and empowerment operate through governance mechanisms rather than direct individual influence (Klus & Müller, 2021). They also extend adaptive leadership by demonstrating that adaptability is structurally conditioned by institutional capacity (Juliana et al., 2023), and expand ethical AI leadership by positioning ethics as a system-level governance function rather than purely normative guidance (Papagiannidis et al., 2025).

Importantly, the study advances theory by showing that leadership effects are mediated

through system-level mechanisms and moderated by institutional conditions, aligning with the proposed conceptual framework. This provides a more comprehensive explanation of how leadership operates in digital banking environments characterized by regulatory complexity and technological change.

Practical and Policy Implications. From a practical and policy perspective, the findings highlight the need for integrated governance approaches to digital transformation. Policymakers and regulators should design frameworks such as regulatory sandboxes and open finance systems that enable controlled innovation while ensuring consumer protection and systemic stability, thereby balancing flexibility with oversight. Strengthening institutional capacity is also critical, particularly in relation to technological expertise, adaptive regulation, and ethical supervision, to effectively respond to emerging risks in digital finance ecosystems. For financial institutions, the findings suggest the need to adopt integrated leadership approaches that combine strategic vision, governance structures, and continuous learning mechanisms, rather than treating leadership dimensions independently. Institutionalizing reflective practices through feedback systems and evaluation processes can further enhance risk management and long-term performance.

Moreover, achieving inclusive digital finance requires addressing structural barriers such as infrastructure gaps, affordability constraints, and limited digital literacy, which remain significant challenges (United Nations, 2022; Ha et al., 2025). Without such interventions, digital transformation risks reinforcing existing inequalities rather than promoting financial inclusion.

Integrated Perspective on Leadership in Digital Banking. Overall, the findings indicate that leadership in digital banking is best understood as an integrated system of interdependent capabilities operating within institutional environments. Rather than functioning as isolated behaviors, the five leadership

dimensions collectively shape innovation, governance, and financial inclusion outcomes through mediated processes and moderated institutional conditions. This perspective reinforces the central argument of the study: that effective digital transformation depends on the alignment of leadership capabilities with governance systems, technological infrastructure, and regulatory contexts. In this sense, leadership is not merely enacted by individuals but is institutionalized within systems, policies, and practices that enable sustainable and inclusive digital finance.

Conclusion. This study examined how leadership operates within digital banking ecosystems through a critical literature review of academic, regulatory, and institutional sources. The review indicates that transformational, digital, adaptive, and ethical leadership perspectives are most effectively understood as interdependent rather than independent approaches, addressing a persistent fragmentation within the existing leadership literature. Specifically, the five leadership dimensions: vision, empowerment, adaptability, ethics, and reflection, collectively shape digital banking outcomes by influencing innovation, governance effectiveness, and financial inclusion. The analysis shows that these leadership dimensions do not operate independently. Instead, they are activated through system-level mechanisms, including coordination, risk calibration, learning, and governance processes, and are conditioned by institutional factors such as regulatory capacity, technological readiness, and resource availability. These findings reinforce the central argument of the study that leadership effectiveness in digital banking is mediated by organizational processes and moderated by institutional contexts, consistent with the proposed conceptual framework.

From a theoretical perspective, the study contributes to leadership and digital banking research by advancing a system-level conceptualization of leadership. By integrating insights from transformational, adaptive, and ethical leadership perspectives, the study

demonstrates that leadership in digitally mediated environments is embedded within governance systems and institutional structures rather than confined to individual agency. This contributes to a more comprehensive understanding of how leadership operates in complex, technology-driven, and highly regulated environments. From a practical and policy standpoint, the findings highlight the importance of integrated governance approaches to digital transformation. Policymakers and regulators must design frameworks that support innovation while maintaining consumer protection and system stability. At the same time, financial institutions should adopt leadership approaches that combine strategic direction, risk management, ethical governance, and continuous learning. Achieving inclusive digital finance further requires addressing structural barriers such as infrastructure gaps, affordability constraints, and disparities in digital literacy.

Taken together, the findings underscore that effective digital transformation depends on the alignment of leadership capabilities with governance systems and institutional conditions. Successful digital banking outcomes emerge not from isolated leadership traits but from the interaction of leadership dimensions, system-level mechanisms, and institutional environments. In this context, leadership is not only enacted by individuals but is institutionalized in policies, processes, and organizational practices that enable sustainable and inclusive outcomes. Future research may build on this framework by empirically testing the relationships identified in this study across different regulatory contexts and technological environments, further refining understanding of leadership in digital finance ecosystems.

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