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Development of the Digital Financial Ecosystem and Its Influence on Banking Competitiveness as well as Sustainable Economic Growth

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Abstract

This literature-based study examines how the development of the digital financial ecosystem influences banking competitiveness and contributes to sustainable economic growth. Guided by content analysis of scholarly works, the study synthesizes evidence on ecosystem development as an interconnected transformation involving digital infrastructure, data-driven service delivery, platform participation, and governance coordination among banks, fintech actors, regulators, and consumers. The findings show that ecosystem development strengthens banking competitiveness through three primary mechanisms: improved efficiency in transaction processing, increased innovation capability through collaborative platform ecosystems, and enhanced customer value via better service quality and user experience. The study further explains that competitiveness supports sustainable economic growth by improving the quality of financial intermediation—such as more effective credit allocation, faster service delivery, and greater financial inclusion—while also promoting financial system resilience when accompanied by robust risk governance. The review also highlights a critical conditionality: digital ecosystem benefits may weaken sustainability outcomes if cybersecurity, data privacy, and algorithmic accountability are insufficient. The study concludes that sustainable growth effects depend on how digital ecosystem maturity is translated into resilient, governance-aligned competitive advantages within banks and supported by appropriate institutional frameworks.

INTRODUCTION (UPPERCASE, Cambria Math 11pt)

The development of the digital financial ecosystem has accelerated rapidly in recent years, reshaping how financial services are delivered, accessed, and consumed by households and firms. In many economies, digital payments, mobile banking, open banking interfaces, and data-driven credit scoring have become everyday infrastructures that reduce transaction costs and improve service speed. However, despite these advances, the relationship between digitalization and banking

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performance is not always straightforward. Several banking institutions face challenges in translating technological adoption into sustainable competitiveness, particularly when digital transformation is implemented without sufficient alignment between technology, risk management, customer experience, and regulatory compliance. As a result, some banks experience operational efficiency improvements but simultaneously encounter new vulnerabilities, such as cybersecurity risks, data privacy concerns, and difficulties in maintaining service quality under high-volume digital demand. Furthermore, differences in digital readiness across regions and customer segments often create unequal benefits, meaning that digital ecosystems may strengthen some market players more than others. This condition raises a central concern: how the development of the digital financial ecosystem truly influences banking competitiveness while also supporting sustainable economic growth, rather than only generating short-term gains. Hence, understanding these dynamics becomes essential for both scholars and policymakers who aim to ensure that digital finance delivers inclusive and long-term development outcomes(Makhammadjonovna & Omadjonovna, 2025).

Existing literature provides valuable insights into the digitalization of finance and its potential benefits, including improved efficiency, enhanced customer reach, and accelerated innovation processes. Studies on digital banking and fintech ecosystems often argue that technology enables banks to reduce costs, refine risk assessment through advanced analytics, and create new revenue streams through digital platforms. Nevertheless, many studies still treat "digital financial ecosystem" as a narrow concept—often focusing on specific tools such as digital payments or online banking features—rather than examining the ecosystem as a system consisting of interrelated actors, infrastructures, data flows, and governance mechanisms. Moreover, while banking competitiveness is widely discussed, measurement approaches vary significantly, ranging from market share and profitability to service quality and innovation capacity, which can lead to inconsistent findings. In addition, the evidence linking digital ecosystem development to sustainable economic growth remains incomplete. Some research emphasizes economic growth effects through financial inclusion and productivity enhancement, but it frequently overlooks how competitiveness among banks mediates this relationship. In other words, it is unclear whether digital ecosystem development improves sustainability outcomes directly, or primarily by strengthening banking competitiveness that then enables more effective intermediation, credit allocation, and risk resilience. These theoretical and empirical limitations create a gap: the literature does not yet fully explain the integrated pathway from digital financial ecosystem development to banking competitiveness and ultimately to sustainable economic growth. Therefore, this study is necessary to bridge the conceptual and practical gaps by providing a more comprehensive understanding of the mechanisms involved(Hun et al., 2024).

This study aims to examine the development of the digital financial ecosystem and its influence on banking competitiveness as well as sustainable economic growth. Specifically, the research seeks to identify how ecosystem development—reflected in the maturity of digital infrastructure, the effectiveness of digital service delivery, and the strength of ecosystem coordination among relevant stakeholders—can shape bank competitiveness indicators such as efficiency, innovation capacity, customer value, and market performance. In addition, the study seeks to evaluate whether banking competitiveness serves as an important channel through which digital ecosystem development contributes to sustainable economic growth. By positioning banking competitiveness as a mediating mechanism, the research intends to clarify the logic that digital finance does not automatically guarantee growth; instead, it must be converted into competitive advantages that improve the quality and stability of financial intermediation. To achieve these goals, the study also formulates a conceptual framework and assesses relevant relationships using an

approach consistent with the research objectives. The ultimate outcome is expected to offer theoretical contribution by linking ecosystem development, bank competitiveness, and sustainability outcomes in an integrated model, while simultaneously providing practical implications for banks, regulators, and ecosystem coordinators seeking to design policies and strategies that ensure digital finance supports resilient and long-term economic progress(Li et al., 2020).

The importance of this research lies in both academic urgency and real-world policy relevance. Academically, the study addresses the unresolved question of how digital financial ecosystem development translates into measurable improvements in banking competitiveness and sustainability outcomes, rather than stopping at descriptive statements about technology adoption. By integrating banking competitiveness into the pathway toward sustainable economic growth, the research can enhance the explanatory power of existing theories related to digital transformation, financial intermediation, and competitive advantage. From a policy perspective, regulators and financial authorities face practical dilemmas: while encouraging digital ecosystem development can promote inclusion and innovation, poorly governed digital ecosystems may generate risks that harm institutional stability and reduce the reliability of financial services. Therefore, a nuanced understanding of how competitiveness is influenced—and how such competitiveness can contribute to sustainability—is essential for determining effective regulatory priorities, supervisory frameworks, and incentive structures. Furthermore, banks themselves need guidance on how to prioritize digital ecosystem investments so that improvements in competitiveness are not transient, but instead build resilience, improve risk management quality, and strengthen their role in supporting real-sector productivity. This study is thus conducted to provide evidence-based insights that can inform strategic decision-making and policy design, ensuring that the evolution of the digital financial ecosystem contributes to sustainable economic growth in a balanced and responsible manner(Tsindeliani et al., 2022).

METHOD

Research Object (Case/Fenomenon)

This study focuses on the phenomenon of how the development of the digital financial ecosystem shapes banking competitiveness and, in turn, influences sustainable economic growth. In practical terms, the observed case involves the growing digitization of financial services, including mobile banking, digital payments, data-driven credit assessment, platform-based financial innovations, and increasingly interconnected relationships among banks, fintech firms, regulators, and consumers. The central problem addressed in this research is that, although digital financial ecosystems have expanded rapidly, their impact on bank competitiveness and sustainability outcomes is not always uniform across countries, institutions, or market segments. Some banks appear to benefit from cost efficiency and innovation advantages, while others face operational risks, cybersecurity threats, regulatory uncertainty, and uneven customer adoption. Therefore, the object of this research is not limited to a single bank or jurisdiction; rather, it is framed as a broader ecosystem-based transformation in the financial sector and its competitive and developmental implications. By examining this phenomenon through relevant literature, the study aims to clarify the conceptual mechanism linking digital ecosystem development to banking competitiveness and sustainable economic growth. This literature-based focus allows the research to identify common patterns, recurring mechanisms, and theoretical explanations that can account for both benefits and limitations observed in digital financial transitions(Matkovskaya et al., 2022).

Research Type and Data Sources (Library Research)

This research employs a qualitative library research design (kepustakaan) to analyze and synthesize relevant scholarly works concerning the research problem. The study uses primary data in the form of directly relevant literature content—namely, conceptual and empirical discussions found in books, peer-reviewed journals, academic theses, and prior studies that specifically address digital financial ecosystem development, banking competitiveness, and sustainable economic growth. These primary literature sources provide the key explanations, definitions, and evidence required to construct the study's analytical framework. In addition, secondary data is collected from complementary references that strengthen and contextualize the study's arguments. Secondary materials include policy reports, central bank or regulator documents, conference papers, working papers, and other scholarly publications that discuss trends in digital finance, ecosystem governance, and sustainability-oriented economic outcomes. The use of both primary and secondary literature ensures that the research can triangulate conceptual definitions, interpretive evidence, and contextual information related to the study's keyword themes: digital financial ecosystem development, banking competitiveness, and sustainable economic growth. By adopting this approach, the study is able to build a coherent narrative and analytical logic without relying on primary field data, while still maintaining methodological rigor through systematic selection and content-based interpretation of relevant sources(Dewantoko, 2025).

Foundational Theories

The analysis in this study is grounded in foundational theories that explain how digital ecosystem development can influence firm-level competitiveness and how competitiveness may contribute to broader economic sustainability outcomes. First, the research draws on the concept of Dynamic Capabilities Theory, introduced by David J. Teece, Gary Pisano, and Amy Shuen (1997), which argues that organizations must continuously integrate, build, and reconfigure internal and external competences to respond to changing environments. In the context of digital finance, this theory supports the assumption that banks which effectively absorb and adapt to digital ecosystem developments are more likely to transform technological changes into competitive advantages. Second, the study incorporates the Institutional Theory framework, associated with DiMaggio and Powell (1983), which explains how organizations respond to institutional pressures—such as regulatory requirements, norms, and legitimacy expectations—by adjusting strategies and structures. This theoretical perspective is particularly relevant for digital financial ecosystems because ecosystem governance and compliance conditions can shape how banks adopt digital innovations and manage related risks. Third, the study is supported by the Resource-Based View (RBV), pioneered by Birger Wernerfelt (1984), which emphasizes that competitive advantage emerges from valuable, rare, inimitable, and organizationally embedded resources. Digital data assets, technological infrastructure, analytics capabilities, and ecosystem relationships can be interpreted as such strategic resources. Together, these theories provide explanatory assumptions for the conceptual links among the development of a digital financial ecosystem, improvements in banking competitiveness, and the eventual contribution to sustainable economic growth through more efficient and resilient financial intermediation(Syed et al., 2022).

Research Process and Literature Collection Techniques

The research process follows structured stages to ensure that the library review remains focused, coherent, and aligned with the research objectives. First, the study identifies and defines the core concepts—digital financial ecosystem development, banking competitiveness, and sustainable economic growth—so that each concept can be operationalized through literature-based indicators

and theoretical interpretations. Second, relevant sources are systematically selected through targeted reading of academic books, journal articles, prior research, working papers, and policy reports that match the research keywords and the phenomenon under study. The data collection technique is primarily carried out through literature reading and documentation, including reviewing conceptual frameworks, empirical findings, definitions, and measurement approaches used in previous studies. Third, extracted information is organized thematically to map relationships among ecosystem development, bank competitiveness dimensions, and sustainable growth mechanisms. Throughout the stages, the study prioritizes sources that provide clear conceptual links, relevant constructs, and evidence-based discussion rather than purely descriptive statements. The process also involves verifying consistency in terminology—such as how "ecosystem development" is described in terms of infrastructure maturity, governance coordination, innovation readiness, and service delivery effectiveness. Finally, synthesized findings are prepared to support the construction of an integrated analytical model that answers the research questions within the library research scope(Mahmud, 2024).

Data Analysis Technique (Content Analysis)

The data analysis technique in this study uses content analysis, enabling the research to systematically examine and interpret the content of selected literature. Content analysis is conducted by reading, categorizing, and coding key statements that relate to the research constructs. The first step is to identify recurring themes and patterns, such as how digital financial ecosystem development is described as influencing banking efficiency, innovation capability, risk resilience, customer value, and competitive positioning. The second step involves organizing extracted content into predetermined categories aligned with the conceptual framework—namely, indicators or dimensions representing ecosystem development, components representing banking competitiveness, and pathways or outcomes connected to sustainable economic growth. The third step is to examine relationships across categories, identifying which mechanisms are repeatedly supported by the literature (e.g., enhanced financial intermediation quality, improved credit allocation, increased financial inclusion, and strengthened stability through better governance and analytics). The final step is to synthesize the coded findings into an integrated discussion that highlights consistent evidence, contrasts differing viewpoints across sources, and explains how the theoretical assumptions connect ecosystem development to competitive outcomes and, subsequently, to sustainability impacts. Through this process, the research produces an interpretive but structured analysis focused on identifying patterns and meaningful information within the body of literature(Kiloes et al., 2024).

RESULT AND DISCUSSION

Result

The literature reviewed in this study indicates that the development of the digital financial ecosystem is typically characterized by the increasing availability of interconnected digital infrastructures, including mobile channels, digital payments, application programming interfaces (APIs), and data-based service delivery. Multiple sources describe these elements as reinforcing each other: digital payments generate transaction data, data enable more accurate credit assessment, and

improved services increase user adoption, which then enlarges the ecosystem's data and transactional coverage. The evidence also suggests that ecosystem development is not only about technology presence, but about the maturity of coordination among banks, fintech firms, regulators, and consumers. As a result, the literature consistently highlights that ecosystem development can create competitive conditions for banks, particularly when banks are capable of converting digital infrastructure into operational advantages and improved customer value. This outcome becomes a foundational result of the study, because it positions the digital financial ecosystem as an enabling environment that shapes how banks compete(Liang et al., 2025).

A consistent pattern across the reviewed literature is that banking competitiveness improves when banks can reduce transaction costs and operational inefficiencies through digital channels. Several studies emphasize that digital transformation—such as automated onboarding, electronic KYC, and streamlined payment processing—reduces time consumption and cost per transaction, enabling banks to operate more efficiently. In addition, digital ecosystems often support real-time risk monitoring and more granular decision-making, which can contribute to better underwriting and faster service delivery. However, the results also show that these benefits are conditional. Banks that adopt digital tools without adequate governance and risk architecture tend to experience operational disruption, compliance failures, or customer dissatisfaction when digital services are unstable. Therefore, the literature provides evidence that digital ecosystem development influences competitiveness through both cost efficiency mechanisms and service quality mechanisms, with governance capacity playing a critical moderating role(Zhao et al., 2026).

The content analysis reveals that innovation capability is another prominent competitiveness dimension influenced by digital financial ecosystem development. The reviewed works commonly link ecosystem digitization with the emergence of new products and business models, including embedded finance, platform partnerships, and personalized financial services. Evidence suggests that banks participating in ecosystems with strong collaboration mechanisms (e.g., fintech partnerships, data-sharing agreements, and regulatory sandboxes) can develop innovations more rapidly than banks operating in isolated technological environments. Furthermore, innovation in digital ecosystems is supported by the availability of data and analytics tools, enabling banks to design targeted offerings and improve product relevance for different customer segments. This result indicates that banking competitiveness is not limited to profitability measures, but also includes the ability to innovate, differentiate services, and respond to customer expectations in a dynamic digital market(Friede et al., 2015).

In addition to efficiency and innovation, the literature indicates that competitiveness is closely related to customer value and user experience. Digital ecosystem development often improves access to financial services, strengthens convenience through omnichannel experiences, and enhances trust through improved transparency and service reliability. The reviewed sources frequently mention that customer experience becomes a competitive weapon, because in digital markets customers can easily switch providers. Therefore, banks that successfully manage digital service quality—such as seamless app performance, reliable payment systems, and effective customer support—tend to maintain or increase market position. The results also show that customer value improvements contribute indirectly to sustainability outcomes: customer retention supports revenue stability, which can finance long-term investments in risk control and sustainable business practices. This connection is frequently presented, though not always explicitly modeled, across the reviewed literature(Otchere et al., 2025).

Regarding the relationship between digital ecosystem development and sustainable economic growth, the literature suggests that sustainable growth effects emerge through improved

financial intermediation quality. The findings indicate that when banks are more competitive, they can allocate credit more effectively, manage risk more responsibly, and lower financing frictions for businesses and households. Several sources describe how improved credit assessment and faster service delivery reduce delays in funding real-sector activities. Additionally, digital ecosystems may expand financial inclusion by enabling underserved communities or small enterprises to access services through lower-cost channels. As a result, competitiveness improvements can translate into stronger economic participation and productivity enhancements, which aligns with the logic of sustainable economic growth(Stoilova et al., 2021).

The results also demonstrate that the contribution to sustainable economic growth is influenced by the stability and resilience of the financial system. Some reviewed works emphasize that digital ecosystems can introduce new systemic risks, such as cybersecurity threats, data privacy concerns, algorithmic bias in credit scoring, and operational concentration risk through platform dependencies. In the literature, banks' competitiveness determines how well they can handle these risks: competitive banks tend to invest more effectively in resilience measures, including robust technology governance, security infrastructures, and compliance capabilities. Therefore, the results reveal an important duality: digital financial ecosystem development can support sustainability through better intermediation and inclusion, but only if competitiveness-building is accompanied by risk management and institutional safeguards(Rafia & Achmad Sudiro, 2020).

A further result from the analysis is that governance and institutional alignment are repeatedly presented as essential conditions. The reviewed literature indicates that ecosystem development depends on regulatory frameworks that support interoperability, consumer protection, transparency, and fair access. When institutional arrangements are weak, digital ecosystem development may not convert into bank competitiveness benefits, because compliance costs increase or trust deteriorates. Additionally, banks that engage actively in ecosystem coordination—through partnerships and compliance harmonization—tend to capture more benefits than those that respond defensively. This result supports the idea that competitiveness is shaped not only by internal capabilities but also by external institutional context. Hence, the findings suggest that sustainable economic growth outcomes require both competitive banks and effective ecosystem governance(García-Aliaga et al., 2025).

Synthesizing the coded themes, the literature supports a pathway model in which digital financial ecosystem development leads to improvements in bank competitiveness through three main channels: efficiency (reduced cost and faster processes), innovation (new products and platform capabilities), and customer value (service quality and retention). These competitiveness improvements then contribute to sustainable economic growth through stronger and more inclusive financial intermediation, better credit allocation, and increased systemic stability. At the same time, the evidence emphasizes that sustainability impacts are sensitive to risk governance; without cybersecurity resilience, data integrity, and ethical decision-making, the positive pathway may be weakened. This structured result provides a coherent answer to the study's research objectives by confirming that competitiveness acts as an influential intermediary mechanism between ecosystem development and sustainable growth.

Overall, the results indicate convergence across the reviewed literature: digital financial ecosystem development has the potential to strengthen banking competitiveness and support sustainable economic growth, but the magnitude and direction of impact depend on ecosystem maturity and governance quality. The evidence suggests that banks must develop dynamic capabilities to adapt rapidly, while also responding to institutional pressures and managing strategic resources effectively. The literature further implies that not all banks benefit equally, because

differences in technological readiness, organizational readiness, and partnership capacity shape competitive outcomes. As a result, the study concludes that an ecosystem-development approach should be complemented with bank-level competitiveness strategies and regulatory-level risk oversight, ensuring that digitalization translates into inclusive and sustainable economic development rather than only short-term efficiency gains.

Discussion

The study's findings support a core interpretation that the digital financial ecosystem should be understood as an interconnected system rather than a collection of isolated digital tools. The results show that ecosystem development creates competitive opportunities for banks when technology, data, partners, and governance align to enable value creation. This interpretation is consistent with the idea that competitive advantage in digital environments is strongly linked to the organization's ability to integrate and reconfigure capabilities as conditions evolve. Therefore, the development of the digital financial ecosystem influences banking competitiveness primarily through enabling mechanisms: it reduces operating frictions, improves access to data-driven decision-making, and facilitates innovation collaboration. This discussion implies that scholars and practitioners should avoid analyzing digital transformation as merely an IT adoption process, because the competitive effects depend on how the ecosystem's components interact.

The mechanisms linking competitiveness to sustainable economic growth are best explained by improved financial intermediation and resilience. The literature indicates that competitive banks can offer faster and more accurate services, reduce credit allocation inefficiencies, and expand access for individuals and enterprises. Such effects can enhance economic participation and productivity, leading to sustainable growth outcomes. However, the study also shows that competitiveness alone is not sufficient; sustainability requires that competitiveness investments strengthen risk governance. In digital ecosystems, new vulnerabilities emerge, including cybersecurity risks and data governance challenges. Hence, competitiveness that improves growth must be "quality competitiveness," meaning it is backed by robust controls and responsible technology use. This discussion broadens how sustainable growth should be conceptualized: it is not only about access and efficiency, but also about system stability and ethical reliability.

From a theoretical perspective, the findings align with dynamic capabilities. Banks that develop dynamic capabilities are more likely to transform digital ecosystem developments into durable competitiveness through continuous adaptation. The results reveal that ecosystem maturity alone does not guarantee improvement; banks must build internal agility to operationalize digital tools, integrate data processes, redesign workflows, and manage change effectively. This discussion suggests that bank competitiveness should be treated as a capability-based outcome, influenced by learning speed, strategic reconfiguration, and partnership coordination. Consequently, digital financial ecosystem development can be viewed as an external change factor, while dynamic capabilities explain how banks convert that change into competitive advantages. This theoretical alignment strengthens the conceptual logic of the study's mediation model.

In addition, the results reflect institutional theory by emphasizing that ecosystem governance and regulatory legitimacy affect whether digital development becomes beneficial. Where regulations support interoperability, consumer protection, and fair data sharing, banks can innovate and compete more effectively. Conversely, weak institutional arrangements increase uncertainty and compliance costs, which may limit banks' ability to capture competitiveness gains. This discussion implies that sustainable growth is co-produced by banks and institutions: competitive banks cannot

fully offset institutional barriers that undermine trust or create compliance obstacles. Therefore, policymakers should coordinate digital ecosystem development with regulatory capacity building to ensure that competitiveness translates into sustainable growth. This also explains why digital finance impacts vary across countries and institutions, as the institutional environment differs.

A key implication from the study is that digital ecosystem development should be managed through a risk-informed competitiveness strategy. The evidence indicates that banks may gain efficiency and innovation advantages but still face sustainability threats if cybersecurity, privacy, and algorithmic governance are insufficient. This discussion highlights the importance of integrating risk management as part of competitiveness-building rather than treating it as a separate compliance function. Moreover, resilience investment—such as secure data architectures, robust incident response systems, and bias monitoring for credit scoring—can protect service continuity and maintain customer trust. When trust is preserved, customer value and retention improve, which in turn supports more stable revenues and long-term investments. Thus, sustainability emerges from the interplay between competitiveness and risk governance quality.

Finally, the findings provide guidance for future research and practical implementation. For future studies, the content analysis suggests the need to refine measurement of "digital financial ecosystem development," since the literature uses varying proxies such as digital infrastructure, interoperability, and governance strength. Similarly, future research should strengthen empirical testing of the mediation role of banking competitiveness between ecosystem development and sustainable growth, ideally using multi-country datasets or longitudinal designs. For practitioners, banks should prioritize ecosystem participation strategies that emphasize partnership quality, data governance capability, and customer-centric service management. Regulators should support ecosystem development with clear standards for security, data protection, and consumer rights. Overall, this study concludes that digital financial ecosystems can foster sustainable economic growth, but only when banking competitiveness is built in a resilient and governance-aligned manner.

Table 1. Risk Governance Investments Supporting Resilience and Customer Trust

Resilience Investment Function	Example Implementation	Expected Protection/Outcome	Link to Sustainability Mechanism
Secure data architectures	Encryption, secure data storage, role-based access control	Reduces data breach risk and protects service integrity	Maintains trustworthy intermediation and continuity
Robust incident response systems	Monitoring, disaster recovery plans, incident playbooks	Limits downtime and accelerates recovery after cyber/operational events	Prevents erosion of customer value and long-term revenue

Bias monitoring for credit scoring	Model audits, fairness testing, ongoing performance monitoring	Reduces discriminatory outcomes and improves decision credibility	Supports inclusive credit allocation that sustains growth
Continuous security/controls updates	Patch management, vulnerability assessments, third-party risk reviews	Lowers likelihood of system compromise over time	Strengthens long-run resilience required for sustainable growth

Table 2. How Preserved Trust Translates into Competitiveness and Sustainable Outcomes

Stage	Mechanism	What Improves	Competitive Advantage Effect	Sustainability Impact
Risk governance quality	Trust-preserving resilience measures	Service reliability, data integrity, ethical credit decisions	Differentiation through stable service delivery	Supports long-term economic participation
Customer trust is maintained	Transparent and reliable digital services	Higher customer value, satisfaction, and retention	Reduces churn; increases recurring revenues	Enables banks to fund long-term investments
Retention leads to stability	Stable customer base and revenue streams	Predictable cash flows and capacity to invest	Strengthens strategic competitiveness	Promotes durable financial intermediation capacity
Competitiveness + resilience	Interplay between performance and governance	Better efficiency, innovation capacity, and risk resilience	Maintains competitive positioning under digital shocks	Sustains growth through stable credit and services

Table 3. Guidance for Future Research and Practical Implementation

Area	Recommendation	Why It Matters	Expected Contribution/Benefit
Future research (measurement)	Refine measurement of "digital financial ecosystem	Current literature uses varying	Improves validity and allows stronger synthesis

	development" using consistent proxies (e.g., infrastructure, interoperability, governance strength)	proxies, reducing comparability	
Future research (testing)	Strengthen empirical testing of banking competitiveness as a mediation mechanism using multi-country datasets or longitudinal designs	Clarifies whether competitiveness truly transmits ecosystem effects	Produces stronger causal evidence for policy and strategy
Bank practice	Prioritize ecosystem participation strategies focusing on partnership quality, data governance capability, and customer-centric service management	Ecosystem benefits depend on implementation quality	Enhances competitiveness while protecting resilience
Regulator practice	Support ecosystem development with clear standards for security, data protection, and consumer rights	Institutional alignment determines trust and compliance feasibility	Reduces systemic risk and strengthens inclusive outcomes
Overall strategy	Build competitiveness in a governance-aligned and resilient manner	Sustainability depends on both performance and risk governance	Increases likelihood that digital finance fosters sustainable growth

CONCLUSION

This literature-based study concludes that the development of the digital financial ecosystem has the potential to strengthen banking competitiveness and support sustainable economic growth, primarily through a chain of mechanisms involving efficiency improvements, innovation capability, and enhanced customer value. The reviewed sources indicate that ecosystem development benefits banks most when digital maturity is accompanied by effective governance coordination and when banks build dynamic capabilities to adapt rapidly to changing digital conditions. Competitiveness then contributes to sustainability by improving financial intermediation quality—such as more effective credit allocation and broader access—while also requiring strong risk management to address new vulnerabilities introduced by digitalization, including cybersecurity, data privacy, and ethical decision-making risks. Overall, the findings suggest that sustainable growth outcomes depend

not only on the presence of digital technologies, but on how banks and institutions convert ecosystem development into resilient and responsible competitive advantages.

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