

DEVELOPING AN ADAPTIVE DIGITAL FINANCE CAPABILITY FRAMEWORK FOR THE ARTIFICIAL INTELLIGENCE ERA: A NARRATIVE LITERATURE REVIEW AND THEORETICAL SYNTHESIS

Berlianna Dewi Setiawan^{1*}, Maria Yovita R.Pandin², Amiartuti
Kusmaningtyas³

Universitas 17 Agustus 1945

Email: berliannabaobei2002@gmail.com

Co-authors: yovita_87@untag-sby.ac.id

amiartuti@untag-sby.ac.id

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ABSTRACT

*The rapid advancement of Artificial Intelligence (AI) has accelerated the transformation of digital finance, requiring organizations to develop adaptive capabilities that extend beyond technology adoption. However, existing studies provide fragmented theoretical explanations by examining dimensions in isolation. This study aims to develop an Adaptive Digital Finance Capability Framework through a Narrative Literature Review (NLR) and Theoretical Synthesis. *To systematically filter secondary data from peer-reviewed literature indexed in Scopus, Web of Science, IEEE Xplore, and ScienceDirect (2020–2025), a transparent literature selection process was implemented using modified PRISMA guidelines.* The selected papers were evaluated using thematic content analysis and coding techniques. The results reveal that adaptive digital finance capability is structurally formed by six strategic dimensions: AI Readiness, Digital Financial Literacy, Digital Trust, Digital Governance, Financial Resilience, and Dynamic Capability. By shifting the analytical lens from technology adoption toward higher-order adaptive organizational capability, this study provides an integrated conceptual framework. This framework offers practical guidance for organizations and policymakers navigating AI-driven financial disruption to achieve a sustainable competitive advantage.*

Keywords: *Adaptive Capability, AI Governance, Digital Finance Capability, Digital Transformation, Dynamic Capability, Financial Resilience, Responsible AI*

INTRODUCTION

The rapid advancement of Artificial Intelligence (AI) has significantly transformed the financial sector, accelerating the evolution of digital finance from conventional electronic financial services toward intelligent, data-driven financial ecosystems (OECD, 2024; Verhoef et al., 2021). AI technologies, including machine learning, big data analytics, blockchain, cloud computing, and intelligent automation, have enhanced the efficiency, accessibility, personalization, and scalability of financial services while creating new opportunities for innovation and financial inclusion (OECD, 2024). Consequently, organizations are increasingly required to develop adaptive capabilities that enable them to respond effectively to continuous technological disruption and increasingly complex financial environments.

Despite the rapid adoption of AI-driven digital finance, organizations continue to encounter substantial challenges in achieving sustainable digital transformation. The increasing dependence on AI technologies has introduced several structural challenges, including algorithmic opacity, cybersecurity threats, data privacy risks, regulatory uncertainty, and governance failures (Arner et al., 2020; OECD, 2024). These challenges indicate that successful digital finance transformation is not determined solely by technological adoption but also by the

ability of organizations to integrate technological resources, human capabilities, governance mechanisms, and strategic adaptability. Therefore, developing adaptive digital finance capability has become an important theoretical and practical concern in the AI era.

From a theoretical perspective, Dynamic Capability Theory (Teece et al., 1997) provides an important foundation for understanding how organizations achieve sustainable competitiveness through their ability to sense technological changes, seize emerging opportunities, and reconfigure resources in response to environmental uncertainty. Complementarily, the Resource-Based View (RBV) (Barney, 1991) emphasizes that competitive advantage emerges from valuable, rare, inimitable, and organizationally embedded resources, including digital competencies, AI capabilities, organizational knowledge, and technological infrastructure. These perspectives suggest that organizations must move beyond technology adoption toward developing integrated adaptive capabilities that enable continuous transformation in AI-driven ecosystems.

Recent empirical studies have examined several determinants associated with digital finance transformation. Verhoef et al. (2021) demonstrated that digital transformation success depends strongly on organizational agility, digital leadership, and innovation capability. Similarly, OECD (2024) highlighted that AI readiness and responsible AI governance are essential components for building trustworthy and sustainable financial ecosystems. Cheng and Qu (2020) found that digital trust significantly influences the adoption of financial technologies, while Morgan et al. (2023) showed that financial resilience contributes to organizational stability in conditions of technological and environmental uncertainty. Furthermore, Agarwal et al. (2023) emphasized that AI readiness strengthens organizational preparedness for digital transformation, whereas Gomber et al. (2021) argued that the future development of digital finance requires the integration of technological innovation, regulatory adaptation, and organizational capability.

However, despite these valuable contributions, existing studies remain fragmented because digital financial literacy, AI readiness, digital trust, digital governance, financial resilience, and dynamic capability are predominantly examined as independent or standalone constructs. Previous research has largely focused on specific dimensions, such as technology adoption, FinTech usage behavior, digital skills, or regulatory mechanisms, rather than explaining how these dimensions collectively interact to form an integrated organizational capability. This fragmented perspective limits a comprehensive understanding of how organizations can build adaptive digital finance capability in response to rapid AI-driven transformation.

Figure 1 illustrates the conceptual research gap by showing that previous studies have primarily investigated these dimensions separately, while limited attention has been given to synthesizing them into a higher-order capability framework.

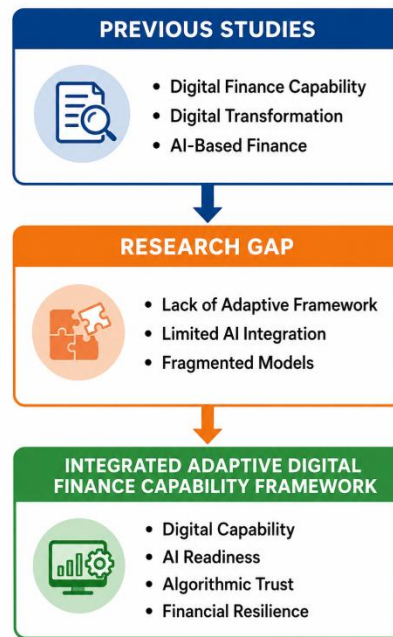


Figure 1. Conceptual Research Gap Diagram

This research gap raises a fundamental theoretical question: How can adaptive digital finance capability be conceptualized as an integrated organizational capability that enables sustainable digital transformation in the Artificial Intelligence era? Addressing this question requires a broader theoretical synthesis that extends beyond conventional technology adoption perspectives by incorporating technological readiness, organizational knowledge, governance quality, trust mechanisms, and financial resilience into a unified capability framework.

Table 1 summarizes the theoretical comparison between previous studies and the position of the present research.

Researcher & Year	Research Focus	Key Findings	Limitations and Research Inconsistencies	Position of This Study
Verhoef et al. (2021)	Digital transformation agility.	Digital transformation success depends on digital leadership, organizational agility, and strategic flexibility.	Limited emphasis on AI-specific risks, governance mechanisms, and financial ecosystem challenges.	Integrates AI governance and adaptive capability perspectives into digital finance transformation.
Cheng & Qu (2020)	Digital trust in FinTech adoption.	Digital trust is a critical determinant of financial technology acceptance and usage.	Primarily focuses on user perception and adoption behavior rather than organizational capability.	Repositions digital trust as an institutional capability supported by governance mechanisms.

Researcher & Year	Research Focus	Key Findings	Limitations and Research Inconsistencies	Position of This Study
Morgan et al. (2023)	Financial literacy and resilience	Financial literacy contributes to resilience and improved financial outcomes.	Mainly examines individual-level capability and provides limited organizational implications.	Elevates digital financial literacy into an organizational and strategic capability dimension.
Agarwal et al. (2023)	AI readiness and digital transformation	AI infrastructure and digital competencies improve organizational readiness.	Focuses primarily on technological preparedness without integrating financial resilience and governance.	Synthesizes AI readiness with governance, trust, and resilience dimensions
OECD (2024)	Responsible AI governance in financial ecosystems.	Effective AI governance is essential for transparency, accountability, and risk mitigation.	Emphasizes policy-level governance rather than firm-level adaptive capability development.	Translates responsible AI principles into organizational capability constructs.
Gomber et al. (2021)	Digital finance ecosystem development.	Digital finance requires technological innovation, regulatory adaptation, and ecosystem collaboration.	Does not provide an integrated capability framework explaining organizational adaptation.	Develops an integrated Adaptive Digital Finance Capability Framework.

Based on the identified research gap, this study proposes an Adaptive Digital Finance Capability Framework developed through a Narrative Literature Review and Theoretical Synthesis approach. Unlike previous studies that examine AI readiness, digital financial literacy, digital trust, digital governance, and financial resilience independently, this study integrates these dimensions as interconnected higher-order capabilities within a unified theoretical framework.

The proposed framework contributes to digital finance literature by shifting the research focus from technology adoption toward adaptive organizational capability development. By integrating Dynamic Capability Theory and the Resource-Based View, this study provides a more comprehensive explanation of how organizations can sense technological disruption, leverage digital resources, establish trustworthy governance mechanisms, and develop resilience in AI-driven financial ecosystems.

Therefore, this study aims to synthesize recent theoretical and empirical literature to identify the fundamental dimensions of adaptive digital finance capability and develop an integrated conceptual framework for organizations operating in the Artificial Intelligence era. The findings are expected to contribute to theory development by establishing a foundation for future empirical validation

and provide practical insights for organizations seeking to strengthen strategic adaptability and sustainable competitiveness in increasingly intelligent financial environments.

LITERATURE REVIEW

Digital Finance Capability in the Artificial Intelligence Era

Digital finance has evolved into one of the most significant drivers of economic transformation in the Fourth Industrial Revolution. The integration of Artificial Intelligence (AI), big data analytics, blockchain, cloud computing, and machine learning has fundamentally reshaped financial services by improving operational efficiency, expanding financial inclusion, strengthening fraud detection, and enhancing financial decision-making. Rather than functioning solely as technological tools, these innovations have become strategic organizational resources that enable financial institutions to respond more effectively to increasingly dynamic and uncertain business environments. Recent reviews indicate that AI is now widely applied in credit scoring, algorithmic trading, robo-advisory services, digital lending, fraud detection, regulatory compliance, and personalized financial management, demonstrating that digital finance has shifted toward intelligent and data-driven financial ecosystems.

The concept of digital finance capability therefore extends beyond the adoption of digital technologies. It reflects an organization's ability to integrate technological infrastructure, digital competencies, financial knowledge, governance mechanisms, and organizational learning into sustainable strategic capabilities. This perspective is consistent with Dynamic Capability Theory proposed by Teece et al. (1997), which argues that organizations sustain competitive advantage through their ability to sense environmental changes, seize emerging opportunities, and continuously transform organizational resources. Recent evidence from the banking sector confirms that institutions possessing stronger digital dynamic capabilities are better able to integrate AI, FinTech, and blockchain technologies while maintaining organizational resilience and long-term competitiveness.

Similarly, the Resource-Based View (RBV) suggests that sustainable competitive advantage is created through valuable and difficult-to-imitate organizational resources. In the AI era, these strategic resources include digital talent, AI infrastructure, organizational knowledge, data governance capability, and innovation culture. Consequently, adaptive digital finance capability should be viewed as a higher-order organizational capability that enables financial institutions to continuously adapt their technological, managerial, and strategic resources in response to digital disruption.

Artificial Intelligence Readiness

Artificial Intelligence readiness has become an essential prerequisite for successful digital finance transformation. AI readiness refers to an organization's preparedness in terms of technological infrastructure, digital skills, organizational culture, leadership commitment, governance systems, and data quality required for effective AI implementation. Organizations with higher AI readiness demonstrate greater capability to integrate intelligent technologies into financial decision-making, risk management, customer relationship management, and operational processes.

Recent literature shows that AI readiness significantly improves

organizational agility and innovation capability while reducing implementation barriers associated with emerging technologies. However, AI implementation also introduces new organizational challenges, including data privacy, ethical considerations, algorithmic transparency, cybersecurity risks, and regulatory compliance. Therefore, successful AI adoption requires not only technological investment but also organizational preparedness and strategic governance.

Digital Trust and Digital Governance

Digital trust has emerged as one of the most influential factors determining the success of AI adoption in financial services. As financial institutions increasingly rely on automated decision-making systems, users must trust that AI-generated recommendations are accurate, transparent, fair, secure, and accountable. Trust therefore extends beyond system performance and encompasses organizational governance, ethical AI implementation, regulatory compliance, explainability, and institutional credibility.

Recent systematic literature reviews demonstrate that trust in AI-supported finance is multidimensional, involving user perceptions, organizational governance, and institutional regulations simultaneously. Explainable Artificial Intelligence (XAI) has consequently become an important mechanism for improving transparency, reducing algorithmic bias, and strengthening stakeholder confidence in AI-enabled financial services. Moreover, governance maturity has been identified as a mediating factor linking AI capability with financial decision quality, suggesting that sophisticated AI technologies alone cannot guarantee superior organizational performance without appropriate governance structures.

Financial Resilience

Financial resilience refers to the capability of organizations to withstand financial shocks, adapt to technological disruption, recover from crises, and sustain long-term organizational performance. In digital financial ecosystems, resilience increasingly depends on adaptive learning, technological flexibility, cybersecurity preparedness, organizational agility, and continuous innovation. Organizations possessing stronger financial resilience are generally more capable of responding to economic uncertainty while maintaining operational continuity and competitive performance.

Previous empirical studies have emphasized that resilience should not be viewed solely as financial stability but also as an adaptive organizational capability supported by digital transformation, AI integration, governance quality, and strategic flexibility. Consequently, financial resilience represents an important dimension of adaptive digital finance capability because it enables organizations to convert technological disruption into sustainable organizational performance.

Research Gap and Theoretical Synthesis

Although previous studies have substantially advanced digital finance research, the existing literature remains fragmented. Most studies investigate AI readiness, digital trust, digital governance, financial resilience, or digital transformation independently, while only limited research attempts to integrate these constructs within a comprehensive organizational capability framework. Existing research predominantly focuses on technology adoption models, AI implementation, or individual financial technologies rather than explaining how organizations develop adaptive capabilities that enable continuous responses to

AI-driven disruption.

Furthermore, recent systematic reviews emphasize that future research should move beyond technology-centric perspectives by integrating organizational capability, governance maturity, strategic adaptability, and institutional trust into a unified conceptual framework capable of explaining sustainable digital finance transformation.

Accordingly, this study develops an Adaptive Digital Finance Capability Framework through a Narrative Literature Review and Theoretical Synthesis. Unlike previous studies that examine AI readiness, digital financial literacy, digital trust, financial resilience, and digital governance separately, this study integrates these dimensions within the perspectives of Dynamic Capability Theory and the Resource-Based View. The proposed framework contributes theoretically by shifting the focus of digital finance research from technology adoption toward adaptive organizational capability, providing a more comprehensive conceptual foundation for explaining how organizations achieve sustainable competitiveness, resilience, and innovation in the Artificial Intelligence era.

RESEARCH METHODS

This study employs a Narrative Literature Review (NLR) combined with a Theoretical Synthesis approach, using a systematic screening protocol based on modified Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to guarantee research accountability.

Search String and Database Procurement, literature searches were conducted across four core academic databases: *Scopus, Web of Science (WoS), IEEE Xplore, and ScienceDirect*. The search architecture utilized the following Boolean search string: ("Artificial Intelligence" or "AI") and ("Digital Finance" or "FinTech") and ("Capability" OR "Governance" or "Resilience").

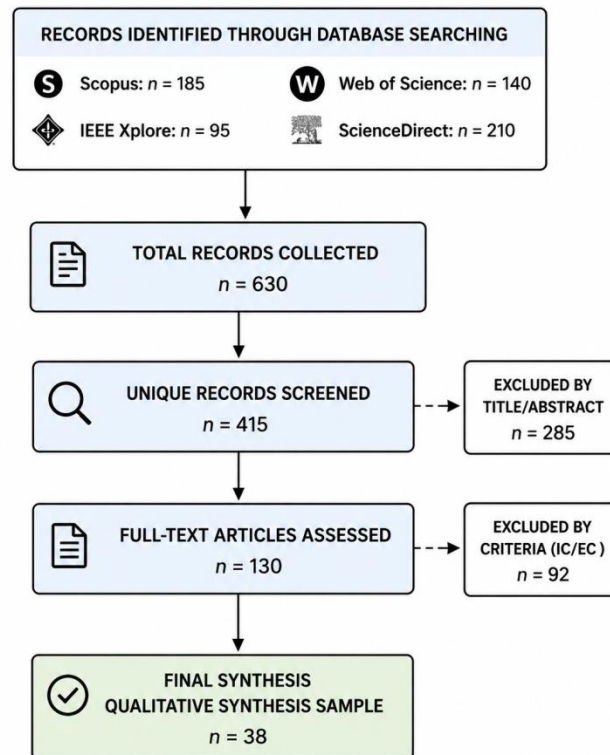
Inclusion and Exclusion Criteria

To capture relevant insights, specific criteria were applied during the selection phase:

- Inclusion Criteria (IC): Peer-reviewed journal articles, conference proceedings, or international institutional whitepapers published between 2020 and 2025; explicitly discussing digital finance, AI applications, corporate capability, or financial resilience; written in English.
- Exclusion Criteria (EC): Non-peer-reviewed notes, book reviews, editorials, short opinion pieces, papers published prior to 2020, and studies focusing purely on generic technical algorithms without organizational applications.

PRISMA Literature Selection Flowchart

The selection process progressed through the clear, quantified stages detailed in the flowchart below:



Coding Procedures and Article Characteristics

The 38 final papers were subjected to open, axial, and selective coding to map structural themes. Open coding identified initial variables (e.g., algorithmic bias, cash buffers, cyber infrastructure). Axial coding grouped these variables into six broader domains. Selective coding integrated these domains into the unified "Adaptive Digital Finance Capability" construct. The literature screening analysis shows that 38 articles were selected from four major academic databases. Scopus contributed the largest proportion of studies (42.1%), followed by Web of Science (31.6%), ScienceDirect (18.4%), and IEEE Xplore (7.9%).

The publication trend indicates an increasing research interest in the topic, with the highest number of studies published during 2024–2025 (42.1%), followed by 2022–2023 (36.8%) and 2020–2021 (21.1%). Regarding research methodology, quantitative empirical studies dominated the reviewed literature (55.3%), while qualitative/conceptual studies accounted for 28.9% and mixed-method approaches represented 15.8%. Overall, the findings indicate that recent research has increasingly focused on empirical validation and evidence-based analysis.

Data Analysis Technique

The selected literature was analyzed using thematic content analysis combined with theoretical synthesis. The analysis consisted of four stages. First, each study was reviewed to identify its theoretical foundations, research objectives, methodologies, and principal findings. Second, similar concepts and variables were grouped into thematic categories. Third, similarities, differences, and inconsistencies among previous studies were critically compared to identify existing research gaps. Finally, the theoretical relationships among the identified constructs were synthesized into an integrated conceptual framework describing the adaptive capabilities required by organizations to successfully implement AI-

enabled digital finance

Research Output

The primary output of this study is a theoretical framework that integrates AI Readiness, Digital Financial Literacy, Digital Trust, Digital Governance, Financial Resilience, and Dynamic Capability into a unified Adaptive Digital Finance Capability Framework. This framework extends previous digital finance literature by providing a comprehensive conceptual explanation of how organizations can develop adaptive capabilities to achieve sustainable competitiveness in the Artificial Intelligence era.

RESULTS AND DISCUSSION

Synthesis of Previous Studies

The narrative literature review identified six major dimensions that consistently influence the development of digital finance capability in the Artificial Intelligence (AI) era: AI Readiness, Digital Financial Literacy, Digital Trust, Digital Governance, Financial Resilience, and Dynamic Capability. These dimensions frequently appear in recent digital finance, FinTech, and digital transformation literature, indicating their strategic importance in enabling organizations to respond to technological disruption and increasing market complexity. Nevertheless, the reviewed studies generally investigate these constructs independently, with limited attempts to explain how they collectively contribute to an integrated organizational capability for sustainable digital finance transformation.

Table 2. Summary of Previous Studies

Dimension	Main Findings	Supporting Studies	Contribution to Framework
AI Readiness	Determines organizational preparedness for AI adoption	OECD (2024); Agarwal et al. (2023)	Technological foundation
Digital Financial Literacy	Improves digital financial decision making	Morgan et al. (2023)	Human Capability
Digital Trust	Encourages AI adoption	Cheng & Qu (2020)	Stakeholder confidence
Digital Governance	Ensures responsible AI implementation	OECD (2024)	Governance mechanism
Financial Resilience	Improves sustainability during disruption	Morgan et al. (2023)	Organizational resilience
Dynamic Capability	Enables continuous adaptation	Teece et al. (1997)	Strategic capability

The synthesis reveals that AI Readiness is widely recognized as the technological foundation for digital transformation. Previous studies argue that organizations with adequate AI infrastructure, skilled human resources, data

availability, and leadership commitment are better prepared to implement AI-driven financial systems effectively (OECD, 2024; Agarwal et al., 2023). AI readiness enables organizations to improve operational efficiency, automate financial processes, strengthen risk management, and support evidence-based strategic decision-making. However, existing studies primarily evaluate AI readiness from a technological or organizational preparedness perspective without examining its interaction with other strategic capabilities.

Similarly, Digital Financial Literacy has been identified as an essential human capability supporting the effective utilization of digital financial technologies. Morgan et al. (2023) emphasized that digital financial literacy improves individuals' and organizations' ability to understand digital financial products, interpret financial information, and make informed financial decisions in increasingly digital environments. Higher levels of digital financial literacy also reduce the risks associated with technology misuse and facilitate greater adoption of AI-enabled financial services. Despite its importance, previous research generally focuses on financial literacy at the individual level, while its integration into organizational capability frameworks remains limited.

Another important dimension is Digital Trust, which has become increasingly significant as financial institutions adopt AI-based decision-making systems. Cheng and Qu (2020) found that digital trust positively influences users' willingness to adopt financial technologies by increasing confidence in system reliability, data security, transparency, and privacy protection. Recent literature also highlights that digital trust depends not only on technological performance but also on ethical AI implementation, explainable algorithms, and institutional credibility. Nevertheless, digital trust has often been investigated as an independent determinant of technology adoption rather than as an integral component of adaptive organizational capability.

The literature further identifies Digital Governance as a critical mechanism for ensuring responsible AI implementation. According to the OECD (2024), effective digital governance includes data governance, cybersecurity, regulatory compliance, ethical AI principles, and organizational accountability. Strong governance frameworks help organizations minimize technological risks while maintaining transparency and stakeholder confidence. Although governance has become an increasingly important research topic, existing studies predominantly examine governance from regulatory or technological perspectives without sufficiently linking it to adaptive organizational capability.

The review also demonstrates the growing importance of Financial Resilience in the digital economy. Morgan et al. (2023) argued that financial resilience enables organizations to withstand economic uncertainty, recover from financial shocks, and maintain sustainable performance during periods of technological disruption. In AI-driven financial ecosystems, resilience is supported by adaptive learning, digital innovation, effective risk management, and organizational flexibility. However, previous empirical studies generally consider financial resilience as an outcome of organizational performance rather than as a strategic capability contributing to digital finance transformation.

Finally, Dynamic Capability, introduced by Teece et al. (1997), provides the overarching theoretical foundation for explaining how organizations continuously adapt to changing business environments. Dynamic capability emphasizes an organization's ability to sense emerging opportunities, seize strategic resources, and transform internal processes to maintain long-term competitiveness. Recent

digital transformation literature reinforces the relevance of dynamic capability in facilitating continuous innovation and organizational adaptability. However, despite its broad theoretical application, relatively few studies explicitly integrate dynamic capability with AI readiness, digital trust, digital governance, financial resilience, and digital financial literacy within the context of digital finance.

Table 3. Summary of Previous Studies

Dimension	Main Findings	Supporting Studies	Contribution to Framework
AI Readiness	Determines organizational preparedness for AI adoption	OECD (2024); Agarwal et al. (2023)	Technological foundation
Digital Financial Literacy	Improves digital financial decision making	Morgan et al. (2023)	Human Capability
Digital Trust	Encourages AI adoption	Cheng & Qu (2020)	Stakeholder confidence
Digital Governance	Ensures responsible AI implementation	OECD (2024)	Governance mechanism
Financial Resilience	Improves sustainability during disruption	Morgan et al. (2023)	Organizational resilience
Dynamic Capability	Enables continuous adaptation	Teece et al. (1997)	Strategic capability

Overall, the synthesis demonstrates that previous studies have made substantial contributions to understanding individual determinants of digital finance transformation. However, these determinants have largely been examined in isolation, resulting in fragmented theoretical explanations. Most studies focus on one or two variables—such as AI readiness and digital trust or digital governance and resilienc without considering the complementary relationships among these dimensions. Consequently, there is still no comprehensive theoretical framework that explains how these strategic capabilities collectively enhance organizational adaptability in AI-driven financial ecosystems.

This finding highlights a significant research gap and provides the primary justification for the present study. By integrating AI Readiness, Digital Financial Literacy, Digital Trust, Digital Governance, Financial Resilience, and Dynamic Capability into a single Adaptive Digital Finance Capability Framework, this study offers a more holistic perspective on organizational capability development. The proposed framework extends previous digital finance literature by shifting the analytical focus from isolated technology adoption factors toward an integrated adaptive capability that supports sustainable digital transformation and long-term competitive advantage in the Artificial Intelligence era.

Development of the Adaptive Digital Finance Capability Framework

The theoretical synthesis indicates that adaptive digital finance capability is a multidimensional organizational capability developed through the interaction of six strategic components.

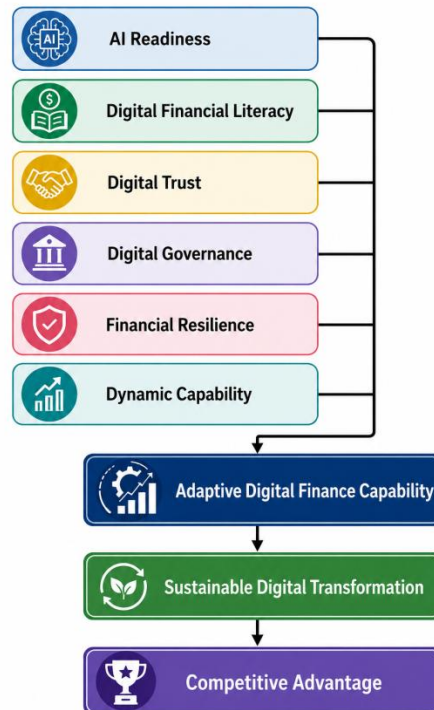


Figure 2. Adaptive Digital Finance Capability Framework

The framework illustrates that AI readiness provides the technological and organizational foundation for AI implementation. Digital financial literacy enables employees and decision-makers to effectively utilize AI-supported financial technologies. Digital trust increases stakeholder confidence in AI-generated financial decisions, while digital governance ensures responsible, ethical, and secure implementation of AI systems. Financial resilience strengthens the organization's capacity to withstand digital disruption, whereas dynamic capability enables continuous adaptation to rapidly changing technological environments. The interaction of these dimensions ultimately forms Adaptive Digital Finance Capability, which supports sustainable digital transformation and long-term competitive advantage.

The findings suggest that digital finance capability should no longer be interpreted solely as technological adoption. Instead, it represents an adaptive organizational capability that integrates technology, human resources, governance, and strategic flexibility. This finding supports Dynamic Capability Theory (Teece et al., 1997), which argues that organizations must continuously sense environmental changes, seize emerging opportunities, and transform organizational resources to sustain competitiveness.

The synthesis also extends the Resource-Based View by demonstrating that strategic resources in the AI era are no longer limited to financial assets or

technological infrastructure. AI readiness, digital competencies, organizational learning, governance quality, and financial resilience collectively constitute valuable organizational resources that are difficult for competitors to imitate. Consequently, adaptive digital finance capability should be regarded as a higher-order capability that enables organizations to generate sustainable competitive advantage through continuous adaptation and innovation.

Furthermore, this study reinforces previous findings reported by Verhoef et al. (2021), who emphasized that successful digital transformation requires organizational agility, strategic flexibility, and continuous capability development rather than technology adoption alone. Similarly, the OECD (2024) highlights that responsible AI governance, transparency, ethical standards, and stakeholder trust are fundamental prerequisites for building sustainable digital financial ecosystems. While these previous studies provide valuable insights into specific aspects of digital transformation, they generally examine AI readiness, governance, resilience, digital competencies, or organizational capability as separate constructs.

The present study advances the existing literature by integrating these dimensions into a unified conceptual framework centered on Adaptive Digital Finance Capability. This integrated perspective offers a more comprehensive explanation of how organizations can effectively respond to technological disruption, manage increasing uncertainty, strengthen organizational resilience, and create sustainable competitive advantage through the coordinated development of technological, managerial, governance, and strategic capabilities. As such, the proposed framework provides a robust theoretical foundation for future empirical research seeking to validate the relationships among these constructs across various industries, organizational sizes, and national contexts in the rapidly evolving AI-driven digital economy.

Critical Discussion of Literature Inconsistencies

The literature review reveals significant empirical inconsistencies regarding how technology adoption impacts financial outcomes. Empirical studies face a prominent friction points labeled the "Digital Productivity Paradox." While some scholars argue that rapid AI integration immediately drives market performance, others show that complex AI systems can degrade operational stability due to unexpected maintenance costs and algorithmic errors.

Furthermore, empirical studies present conflicting views on the role of digital trust. Quantitative models often treat trust as an automatic byproduct of secure technical design. However, qualitative organizational analyses suggest that trust behaves non-linearly; if an organization introduces automated AI solutions without establishing clear ethical governance, stakeholder trust can quickly decline despite high technical security. This framework addresses these inconsistencies by arguing that technological readiness cannot act as a standalone driver of value. Instead, it must be supported by corporate governance and dynamic capabilities to successfully mitigate structural disruption.

Mechanism of Inter-Dimensional Relationships, the adaptive digital finance Capability Framework is built upon the systemic interactions among six distinct dimensions. Rather than operating in isolation, these components reinforce one another to drive sustainable transformation.

Research Novelty and Contribution

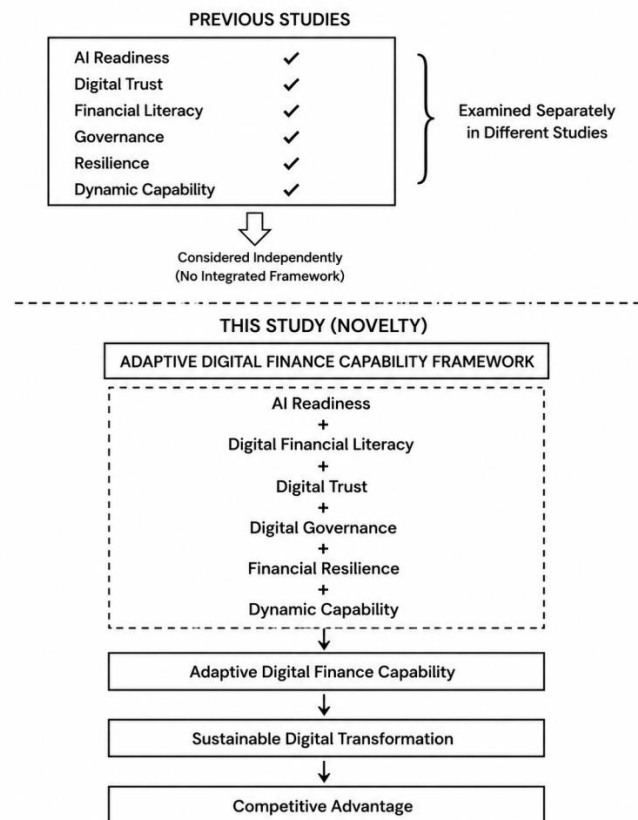


Figure 3. Novelty and Contribution

The principal contribution of this study lies in the development of an Adaptive Digital Finance Capability Framework through a theoretical synthesis of recent digital finance literature. Unlike previous studies that mainly examine technology adoption, FinTech implementation, AI readiness, or digital trust as separate constructs, this study integrates six strategic dimensions—AI Readiness, Digital Financial Literacy, Digital Trust and Governance, Financial Resilience, Dynamic Capability, and Competitive Advantage—into a comprehensive organizational capability model.

The selection of these dimensions is theoretically grounded in Dynamic Capability Theory and the Resource-Based View (RBV), which explain how organizations transform technological resources into adaptive capabilities and sustainable competitive advantage. AI Readiness provides the technological foundation, while Digital Financial Literacy ensures that employees have the capability to utilize digital financial systems effectively. Digital Trust and Governance strengthen responsible and secure technology utilization, which supports Financial Resilience in facing uncertainty and disruption. Furthermore, Financial Resilience enables organizations to develop Dynamic Capability through continuous sensing, seizing, and reconfiguring resources, ultimately leading to Competitive Advantage in the digital finance ecosystem.

This framework provides three main contributions. First, it extends digital finance literature by shifting the focus from technology adoption toward adaptive organizational capability development. Second, it integrates technological, human,

governance, and strategic perspectives into a unified model explaining how organizations achieve sustainable competitiveness in AI-driven financial environments. Third, it offers a conceptual foundation for future empirical research investigating the relationships among AI readiness, digital financial literacy, digital trust and governance, financial resilience, dynamic capability, and organizational performance. Overall, the framework suggests that organizations capable of simultaneously developing these six dimensions are better positioned to achieve successful digital transformation, enhance financial decision-making quality, strengthen resilience, and sustain long-term competitive advantage in the Artificial Intelligence era.

CONCLUSION

This study synthesizes existing literature into a unified Adaptive Digital Finance Capability Framework, built upon six interrelated dimensions: AI Readiness, Digital Financial Literacy, Digital Trust, Digital Governance, Financial Resilience, and Dynamic Capability. By shifting the focus away from basic technology adoption models, the framework explains how firms can coordinate their human, technical, and governance resources to turn industry disruptions into sustainable performance.

Limitations, this study is primarily limited by its reliance on a qualitative narrative review and theoretical synthesis. Because the proposed framework is conceptual, the structural relationships among its dimensions have not yet been statistically validated using primary field data across varying industries or geographic locations.

Practical and Managerial Implications, for corporate executives, this framework suggests that investing in advanced AI technologies will yield suboptimal returns unless supported by targeted upskilling programs and robust risk management systems. Managers should focus on deploying Explainable AI (XAI) models to build long-term stakeholder trust. In addition, organizations should treat corporate governance not merely as a compliance requirement, but as a strategic asset that protects digital infrastructure and improves long-term decision-making.

Policy Implications, regulators and financial policymakers should move beyond restrictive compliance rules and focus on creating comprehensive guidelines that promote responsible AI implementation. Public policy should incentivize companies to adopt open governance standards, improve data privacy protection, and support ecosystem-wide financial resilience. These measures help shield the broader financial market from systemic algorithmic failures and unexpected cyber disruptions.

Future Research Agenda, future studies should focus on operationalizing the six dimensions of this framework by developing and validating empirical measurement scales. Researchers are encouraged to use structural equation modeling (SEM) to statistically test the path relationships outlined in this study. Finally, conducting longitudinal case studies would help evaluate how these dimensions evolve across different organizational sizes and regulatory

environments over time.

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