

# From Financial Modelling To Financial Decision Intelligence: The Emerging Role Of Artificial Intelligence

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## ABSTRACT

Through the introduction of Financial Decision Intelligence, the study provides an integrative theoretical perspective explaining how Artificial Intelligence transforms financial decision-making into a continuous process of strategic intelligence creation. In doing so, it offers a conceptual foundation for future empirical research and advances the understanding of how organizations can leverage AI to strengthen strategic decision capability in the digital economy. Using an Integrative Literature Review (ILR), the study synthesizes multidisciplinary literature spanning strategic management, finance, business analytics, information systems, and artificial intelligence to develop an integrated theoretical framework. This study contributes to the strategic management literature by reconceptualizing financial modelling as a dynamic organizational capability, integrating previously fragmented theoretical perspectives, and establishing a conceptual foundation for future empirical research on AI-enabled financial decision capability. Beyond its theoretical contribution, the proposed framework also offers practical guidance for organizations seeking to strengthen evidence-based financial governance, strategic adaptability, and sustainable competitive advantage in increasingly data-intensive business environments.

**Keywords:** Artificial Intelligence; Financial Decision Intelligence; Financial Modelling; Strategic Decision-Making.

## ABSTRAK

*Melalui pengenalan konsep Financial Decision Intelligence, penelitian ini menawarkan perspektif teoretis integratif yang menjelaskan bagaimana Artificial Intelligence (AI) mentransformasi pengambilan keputusan keuangan menjadi suatu proses berkelanjutan dalam menghasilkan kecerdasan strategis. Dengan demikian, penelitian ini menyediakan landasan konseptual bagi penelitian empiris di masa mendatang sekaligus memperkaya pemahaman mengenai bagaimana organisasi dapat memanfaatkan AI untuk memperkuat kapabilitas pengambilan keputusan strategis di era ekonomi digital. Menggunakan pendekatan Integrative Literature Review (ILR), penelitian ini mensintesis literatur multidisiplin yang mencakup manajemen strategis, keuangan, analitik bisnis, sistem informasi, dan kecerdasan buatan guna mengembangkan suatu kerangka teoretis yang terintegrasi. Penelitian ini memberikan kontribusi terhadap literatur manajemen strategis melalui rekonseptualisasi financial modelling sebagai kapabilitas organisasi yang bersifat dinamis, mengintegrasikan berbagai perspektif teoretis yang sebelumnya masih terfragmentasi, serta membangun landasan konseptual bagi penelitian empiris di masa depan mengenai kapabilitas pengambilan keputusan keuangan yang didukung oleh AI. Selain memberikan kontribusi teoretis, kerangka yang diusulkan juga menawarkan panduan praktis bagi organisasi dalam memperkuat tata kelola keuangan berbasis bukti (evidence-based financial governance), meningkatkan kemampuan adaptasi strategis, serta membangun keunggulan kompetitif yang berkelanjutan di tengah lingkungan bisnis yang semakin intensif terhadap data.*

**Kata Kunci:** Artificial Intelligence; Financial Decision Intelligence; Financial Modelling; Pengambilan Keputusan Strategis.

## INTRODUCTION

Artificial Intelligence (AI) has become one of the most transformative technologies reshaping organizations in the digital economy. Unlike earlier information technologies that primarily automated routine operations, contemporary AI increasingly functions as a strategic organizational resource that enhances managerial cognition, organizational learning, and evidence-based decision-making. Rapid advances in machine learning, deep learning, natural language processing, and generative AI have significantly expanded organizations' capability to process large volumes of structured and unstructured data, enabling managers to generate more accurate, timely, and actionable strategic insights (Dwivedi et al., 2023; Raisch & Krakowski, 2021; Wamba et al., 2021).

The growing adoption of AI has fundamentally transformed how organizations formulate competitive strategies and allocate strategic resources. Rather than serving merely as an operational support technology, AI is increasingly recognized as a strategic capability that strengthens analytical performance, organizational agility, and dynamic capabilities while enabling firms to respond more effectively to environmental uncertainty. Organizations that successfully integrate AI into strategic management processes are better positioned to identify emerging opportunities, anticipate market changes, optimize resource allocation, and sustain long-term competitive advantage (Alsheibani et al., 2020; Mikalef & Gupta, 2021). Consequently, AI has evolved from a technological innovation into an important organizational capability that supports strategic value creation.

Among the organizational functions influenced by AI, financial management has experienced one of the most significant transformations. Financial information remains the primary basis for evaluating organizational performance, investment feasibility, operational efficiency, capital allocation, and long-term business sustainability. Accordingly, financial modelling has long served as an essential analytical instrument for forecasting business performance, assessing investment alternatives, estimating corporate value, and supporting strategic planning. Conventional financial models—typically developed through spreadsheet-based analysis, quantitative forecasting techniques, and managerial expertise—have provided organizations with structured approaches for evaluating alternative business scenarios and supporting managerial decision-making.

Despite its continuing importance, traditional financial modelling increasingly faces limitations in digitally connected business environments characterized by data abundance, environmental uncertainty, and rapidly changing market conditions.

Modern organizations generate financial intelligence from enterprise systems, digital platforms, customer interactions, IoT devices, social media, and global supply chains. As organizational information becomes more heterogeneous, real-time, and interconnected, financial models that rely primarily on historical data and static analytical assumptions become less capable of representing complex organizational realities (Appelbaum et al., 2022; Cockcroft & Russell, 2023). These developments highlight the need for more adaptive analytical approaches capable of continuously integrating diverse information sources into managerial decision processes.

Recent advances in AI have substantially extended the role of financial modelling beyond conventional quantitative analysis. AI-enabled analytical systems integrate heterogeneous data, identify hidden financial relationships, generate predictive and prescriptive insights, simulate business scenarios, and continuously refine analytical outputs as new information becomes available. Rather than replacing managerial expertise, AI augments financial analysis by providing explainable recommendations, identifying emerging business risks, and supporting managers in evaluating strategic alternatives under conditions of uncertainty (Davenport & Mittal, 2022; Dwivedi et al., 2023; Ransbotham et al., 2023). Consequently, financial modelling is evolving from a static analytical technique into an adaptive and continuously learning decision-support capability.

This transformation reflects a broader shift in strategic management. As organizations increasingly operate in intelligence-driven environments, competitive advantage depends not only on access to financial information but also on the capability to transform financial data into strategic intelligence. In this context, AI contributes beyond computational efficiency by integrating analytical capability, managerial expertise, and strategic reasoning into organizational decision processes. Therefore, financial modelling should no longer be viewed solely as a technical financial analysis tool but as the analytical foundation upon which AI-enabled strategic decision capability can be developed.

Despite the rapid advancement of Artificial Intelligence in organizational finance, the existing literature remains fragmented across multiple disciplinary domains. Recent studies have extensively examined AI applications in financial forecasting, investment analysis, fraud detection, portfolio optimization, budgeting, credit risk assessment, accounting automation, and business analytics (Cao, 2022; Davenport & Mittal, 2022; Dwivedi et al., 2023). Collectively, these studies demonstrate that AI enhances predictive accuracy, computational efficiency, and analytical performance across diverse financial functions. Likewise, research in strategic management increasingly recognizes AI as an organizational capability that strengthens strategic planning, resource allocation, organizational agility, and adaptive decision-making under conditions of uncertainty (Mikalef & Gupta, 2021; Ransbotham et al., 2023).

Although these contributions have substantially advanced the understanding of AI adoption, most existing studies remain function-oriented. Current research predominantly investigates how AI enhances specific financial activities—such as forecasting, investment evaluation, or risk management—rather than explaining how AI fundamentally reshapes the architecture of organizational financial decision-making. Consequently, financial modelling continues to be viewed primarily as an analytical technique for generating quantitative outputs instead of an evolving organizational capability that supports strategic managerial judgement. This functional orientation limits the theoretical understanding of AI's strategic contribution beyond improvements in analytical performance.

A second limitation concerns the fragmented development of related theoretical perspectives. Financial modelling, financial analytics, business intelligence, decision support systems, managerial analytics, and Decision Intelligence are generally examined as separate streams of research. While each perspective contributes valuable insights, relatively few studies integrate these complementary concepts into a unified framework capable of explaining AI-enabled financial decision-making from a strategic management perspective. As a result, existing literature provides only a partial explanation of how AI combines analytical modelling, predictive intelligence, managerial interpretation, organizational learning, and strategic reasoning into a coherent organizational decision capability.

The increasing complexity of organizational environments further exposes this conceptual limitation. Managers now require more than accurate financial forecasts; they increasingly depend on contextual interpretation, scenario simulation, adaptive recommendations, and continuously updated strategic insights to support complex decision-making. Conventional financial modelling frameworks, however, were primarily designed to estimate financial outcomes using historical information and predefined assumptions. Consequently, they provide only limited explanations of AI-enabled organizational learning, where analytical models evolve continuously through real-time data integration, feedback mechanisms, and adaptive intelligence. This evolution suggests that AI transforms not only the analytical performance of financial models but also the broader process of organizational financial decision-making.

From a strategic management perspective, this limitation reveals a more fundamental theoretical gap. While AI is widely recognized as a source of organizational capability and competitive advantage, limited conceptual attention has been devoted to explaining how AI reshapes financial decision capability as an integrated strategic resource. Existing frameworks largely explain technology adoption, digital transformation, or analytical performance independently, yet seldom clarify how financial modelling evolves into a capability that generates strategic financial intelligence. Consequently, current theoretical perspectives remain insufficient to explain the transition from computational financial analysis toward AI-enabled strategic financial decision-making.

The absence of an integrative perspective therefore creates an important opportunity for theory development. Without a comprehensive conceptual framework, the relationships among AI-enabled analytics, financial modelling, managerial judgement, organizational learning, and strategic decision capability remain only partially understood. This limitation not only constrains theoretical advancement but also reduces the practical value of existing models for organizations seeking to integrate AI into strategic financial management. Accordingly, a broader conceptual framework is required to synthesize these fragmented perspectives into a coherent explanation of AI-enabled financial decision capability.

The theoretical fragmentation identified in previous studies suggests that advances in Artificial Intelligence have outpaced the development of conceptual frameworks explaining its strategic role in organizational financial decision-making. Although AI technologies have

advanced substantially, existing perspectives remain largely anchored in analytical paradigms that emphasize predictive performance, computational efficiency, or technology implementation. Consequently, limited attention has been devoted to explaining how AI reshapes financial decision-making through the interaction of analytical modelling, intelligent analytics, managerial judgement, and strategic reasoning.

This conceptual limitation has become increasingly significant as organizations transition from data-rich environments to intelligence-driven enterprises. Advances in AI enable organizations not only to automate financial analysis but also to integrate heterogeneous data, generate predictive and prescriptive insights, simulate strategic alternatives, and continuously refine managerial knowledge through adaptive learning. As a result, organizational value is created not merely through the production of financial models but through the capability to transform analytical outputs into strategic financial intelligence that supports high-quality managerial decisions. This shift indicates that the object of analysis should extend beyond financial modelling toward the broader capability of intelligent financial decision-making.

Despite these developments, no existing concept fully explains this transformation. Financial modelling primarily focuses on quantitative representation of financial performance; business intelligence emphasizes organizational information processing; financial analytics concentrates on extracting insights from financial data; decision support systems facilitate managerial decisions through technology; and Decision Intelligence integrates data science with decision processes. Although complementary, these perspectives, they do not explicitly explain how AI transforms financial modelling into an integrated strategic capability that combines analytical modelling, intelligent analytics, managerial judgement, organizational learning, and strategic decision-making within a unified financial decision process.

Addressing this limitation requires more than incremental refinement of existing theories. Instead, it calls for a higher-order conceptual framework capable of integrating these fragmented perspectives into a coherent explanation of AI-enabled financial decision capability. Such a framework should recognize that AI contributes not only to analytical efficiency but also to managerial cognition, organizational learning, strategic reasoning, and adaptive decision-making. Understanding AI's strategic role therefore requires moving beyond technology-centric perspectives toward a capability-oriented explanation of how organizations create value through intelligent financial decisions.

Responding to this need, this study introduces Financial Decision Intelligence (FDI) as a new conceptual framework that explains how Artificial Intelligence transforms conventional financial modelling into an integrated organizational decision capability. Rather than viewing AI merely as an analytical technology or financial modelling solely as a computational technique, FDI integrates four interdependent dimensions: (1) Financial Modelling as the analytical foundation, (2) AI-enabled Analytics as the intelligence engine, (3) Managerial Judgement as the interpretative mechanism, and (4) Strategic Decision-Making as the organizational outcome. Together, these dimensions conceptualize Financial Decision Intelligence as a dynamic organizational capability that continuously generates strategic financial intelligence to strengthen organizational adaptability and competitive advantage.

Financial Decision Intelligence advances the literature in three important ways. First, it reconceptualizes financial modelling from a static analytical instrument into an evolving organizational capability. Second, it synthesizes previously fragmented research streams—including financial analytics, business intelligence, decision support systems, managerial analytics, and AI-enabled strategic management—into a unified theoretical framework. Third, it positions AI as a strategic enabler that integrates analytical capability, managerial cognition, and organizational learning into intelligent financial decision processes. Ultimately, FDI provides a more comprehensive theoretical explanation of how AI contributes to strategic management through organizational financial decision capability rather than through isolated technological applications.

Building upon the preceding discussion, this conceptual study aims to develop an integrated theoretical framework that explains the transformation of traditional financial modelling into Financial Decision Intelligence (FDI) within the broader context of strategic management. Drawing on an Integrative Literature Review, the study synthesizes contemporary research on Artificial Intelligence, financial modelling, business analytics, managerial decision-making, and strategic management to explain how AI reshapes organizational financial decision capability beyond its conventional analytical role. Rather than viewing AI as an isolated technological innovation, this study positions it as a strategic capability that enables the

continuous integration of analytical intelligence, managerial judgement, and organizational learning in support of high-quality financial decision-making.

Accordingly, this study conceptualizes Financial Decision Intelligence as a higher-order organizational capability that links financial modelling, AI-enabled analytics, managerial judgement, organizational learning, and strategic decision-making within a unified conceptual framework. By integrating these previously fragmented perspectives, the proposed framework explains how organizations transform financial information into strategic financial intelligence capable of supporting sustainable value creation and long-term competitive advantage in increasingly dynamic business environments.

This study makes three principal theoretical contributions to the strategic management literature. First, it conceptualizes Financial Decision Intelligence as a novel framework that explains the evolution of financial modelling from a predominantly analytical instrument into an AI-enabled organizational decision capability. Second, it synthesizes fragmented streams of research—including Artificial Intelligence, financial modelling, financial analytics, business intelligence, decision support systems, and strategic management—into a coherent theoretical perspective that clarifies the foundations of AI-enabled financial decision capability. Third, it extends existing strategic management literature by proposing that organizational competitiveness increasingly depends on the capability to transform analytical outputs into actionable strategic financial intelligence through the complementary interaction of intelligent technologies and managerial expertise.

Beyond its theoretical contributions, the proposed framework also offers practical implications for managers, organizational leaders, and policymakers seeking to integrate AI into organizational financial decision processes. By emphasizing the interaction among analytical capability, AI-enabled analytics, managerial judgement, and strategic interpretation, Financial Decision Intelligence provides a conceptual foundation for designing more adaptive, transparent, and evidence-based financial governance systems. Furthermore, the framework establishes a foundation for future empirical research aimed at operationalizing Financial Decision Intelligence, developing reliable measurement dimensions, and examining its influence on strategic decision quality, organizational resilience, innovation capability, and sustainable competitive advantage across diverse organizational contexts.

Overall, this study contributes to the emerging discourse on AI-enabled strategic management by repositioning financial modelling as a dynamic organizational capability rather than merely a technical analytical tool. Through the introduction of Financial Decision Intelligence, the study provides an integrative theoretical perspective explaining how Artificial Intelligence transforms financial decision-making into a continuous process of strategic intelligence creation. In doing so, it offers a conceptual foundation for future empirical research and advances the understanding of how organizations can leverage AI to strengthen strategic decision capability in the digital economy.

## RESEARCH METHOD

This study adopts a conceptual research design employing an Integrative Literature Review (ILR) to develop a theoretical framework explaining the transformation of traditional financial modelling into Financial Decision Intelligence (FDI) within the context of strategic management. Unlike empirical research that primarily tests hypotheses using quantitative or qualitative data, conceptual research seeks to advance theory by synthesizing existing knowledge, identifying conceptual gaps, integrating fragmented perspectives, and proposing new theoretical relationships that enhance understanding of emerging organizational phenomena (Jaakkola, 2020; Snyder, 2019).

An Integrative Literature Review is particularly appropriate for this study because research on Artificial Intelligence, financial modelling, managerial decision-making, and strategic management has evolved across multiple academic disciplines, including finance, accounting, information systems, business analytics, organizational studies, and management. Although these disciplines collectively contribute to understanding AI-enabled financial decision-making, they have largely developed independently, resulting in fragmented theoretical perspectives. Consequently, this study employs ILR to integrate dispersed knowledge into a coherent conceptual framework explaining how AI reshapes financial modelling into an organizational capability for strategic decision-making.

Compared with systematic literature reviews that generally synthesize empirical evidence to answer narrowly defined research questions, ILR offers greater flexibility for



integrating conceptual, theoretical, and empirical studies originating from different disciplinary traditions. This approach facilitates critical interpretation, conceptual comparison, theory integration, and framework development, making it particularly suitable for studies that seek to generate new theoretical perspectives rather than aggregate empirical findings (Jaakkola, 2020; Snyder, 2019; Torraco, 2005).

Building upon this methodological approach, the development of the proposed Financial Decision Intelligence framework followed an iterative process comprising literature identification, critical evaluation, thematic synthesis, conceptual integration, and theoretical abstraction. Through these interconnected stages, recurring concepts and theoretical relationships were synthesized to explain how Artificial Intelligence transforms financial modelling into an integrated capability supporting intelligent financial decision-making. Accordingly, the primary outcome of this study is the development of a new conceptual framework intended to enrich strategic management literature while providing a theoretical foundation for future empirical research.

This study employs an Integrative Literature Review (ILR) as the primary methodological approach for developing the proposed Financial Decision Intelligence (FDI) framework. Consistent with conceptual research, ILR enables the integration of theoretical, conceptual, and empirical knowledge from multiple disciplines to generate new theoretical insights and support framework development (Jaakkola, 2020; Snyder, 2019; Torraco, 2005). Unlike systematic reviews that primarily synthesize empirical evidence to address narrowly defined research questions, ILR emphasizes conceptual interpretation, theoretical integration, and knowledge synthesis across heterogeneous bodies of literature.

The adoption of ILR is appropriate because the principal concepts underpinning this study—including Artificial Intelligence, financial modelling, financial analytics, managerial decision-making, business intelligence, and strategic management—have developed across different academic domains. Although these perspectives collectively contribute to understanding AI-enabled financial decision-making, they remain conceptually fragmented. Consequently, an integrative review provides the methodological flexibility required to connect these complementary perspectives into a unified conceptual explanation of Financial Decision Intelligence.

Following the methodological guidance of Torraco (2005), Snyder (2019), and Jaakkola (2020), the review was conducted through four iterative stages. First, key concepts and theoretical perspectives relevant to the study were identified from multidisciplinary literature. Second, the selected studies were critically evaluated to identify recurring constructs, conceptual similarities, theoretical inconsistencies, and unresolved research gaps. Third, related concepts were comparatively synthesized to establish theoretical relationships among the principal constructs. Finally, these synthesized relationships were abstracted into an integrated conceptual framework representing Financial Decision Intelligence.

Rather than treating previous studies as isolated sources of evidence, this review interprets them as complementary theoretical contributions that collectively explain the evolution of AI-enabled financial decision capability. Through iterative comparison and conceptual abstraction, fragmented knowledge was reorganized into a coherent framework that explains the interaction among financial modelling, AI-enabled analytics, managerial judgement, organizational learning, and strategic decision-making. This process strengthens the internal coherence of the proposed framework while extending existing perspectives on AI-enabled financial decision-making within strategic management.

A structured literature search strategy was employed to ensure the comprehensiveness, transparency, and credibility of the proposed Financial Decision Intelligence (FDI) framework. The search focused on contemporary peer-reviewed publications that provide conceptual, theoretical, and empirical insights into Artificial Intelligence, financial modelling, financial analytics, managerial decision-making, and strategic management, while maintaining sufficient breadth to reflect the multidisciplinary nature of the research topic.

The literature was retrieved from internationally recognized academic databases, including Scopus, Web of Science, ScienceDirect, SpringerLink, Emerald Insight, Taylor & Francis Online, and Wiley Online Library. To complement database searches and identify influential conceptual studies and seminal publications, additional citation tracking was conducted through Google Scholar. The use of multiple databases ensured broad coverage across finance, accounting, information systems, business analytics, and strategic management.

The search strategy employed combinations of predefined keywords using Boolean operators (AND Ramsbotham OR). The principal keywords included Artificial Intelligence, Financial Modelling, Financial Decision Making, Decision Intelligence, Financial Analytics, Business Intelligence, Managerial Decision Making, Strategic Management, AI-enabled Decision Support, and Organizational Capability. Backward and forward citation tracking was subsequently performed to identify influential studies that were not captured during the initial search.

To ensure the relevance and quality of the reviewed literature, explicit inclusion and exclusion criteria were established prior to the selection process. Included studies were limited to peer-reviewed journal articles written in English and published primarily between 2020 and 2026, while earlier seminal references were retained where theoretically appropriate. Eligible publications addressed Artificial Intelligence, financial modelling, financial analytics, decision intelligence, managerial decision-making, business intelligence, or strategic management from conceptual, theoretical, or empirical perspectives relevant to AI-enabled financial decision capability. Conference papers, editorials, dissertations, book reviews, duplicate records, and publications unrelated to the research objectives were excluded.

Following the initial screening, the selected studies underwent a conceptual relevance assessment based on theoretical contribution, methodological rigor, scholarly influence, and their relevance to explaining the relationships among Artificial Intelligence, financial modelling, managerial judgement, and strategic decision-making. Rather than maximizing the number of included publications, this study prioritized conceptually influential literature that supported theory development and framework construction. This structured search strategy provides a transparent and rigorous foundation for the subsequent thematic synthesis and conceptual development of the Financial Decision Intelligence framework.

Following the literature search, the retrieved publications underwent a structured selection and analytical procedure to ensure that only studies providing substantial theoretical and conceptual contributions were included in the development of the Financial Decision Intelligence (FDI) framework. Consistent with the principles of Integrative Literature Review, the objective of this process was to identify literature capable of explaining the relationships among Artificial Intelligence, financial modelling, managerial judgement, and strategic decision-making rather than maximizing the number of reviewed publications.

The literature selection was conducted through four sequential stages. First, duplicate records and publications that did not satisfy the predefined inclusion criteria were removed. Second, the titles and abstracts of the remaining studies were screened to evaluate their relevance to AI-enabled financial decision-making. Third, potentially relevant articles underwent full-text assessment to determine their theoretical contribution, conceptual relevance, and methodological quality. Finally, the selected studies were retained for detailed conceptual analysis and synthesis.

The selected literature was evaluated using qualitative criteria appropriate for conceptual theory-building research. Each publication was assessed according to four dimensions: (1) theoretical relevance, (2) conceptual contribution, (3) methodological rigor and scholarly credibility, and (4) relevance to the development of the proposed Financial Decision Intelligence framework. These criteria ensured that the final body of literature reflected both conceptual depth and multidisciplinary representation.

Following the selection process, the reviewed studies were subjected to iterative thematic synthesis. Concepts identified across individual publications were continuously compared to identify recurring themes, conceptual similarities, complementary perspectives, and unresolved theoretical inconsistencies. Through comparative analysis across finance, accounting, information systems, business analytics, organizational studies, and strategic management, higher-order conceptual relationships gradually emerged and formed the basis of the proposed Financial Decision Intelligence framework.

The analytical procedure emphasized conceptual abstraction rather than empirical aggregation. Instead of comparing statistical findings, the analysis focused on identifying theoretical patterns that explain how Artificial Intelligence transforms financial modelling into an integrated organizational capability supporting strategic decision-making. Throughout the synthesis process, concepts were continuously refined to strengthen conceptual consistency and internal coherence. Consequently, the proposed Financial Decision Intelligence framework represents a theoretically grounded synthesis derived from systematic conceptual integration across multidisciplinary literature.



Figure 1. Integrative Literature Review Process for Developing the Financial Decision Intelligence Framework

The conceptual synthesis generated through the procedure illustrated in Figure 1 served as the foundation for developing the proposed Financial Decision Intelligence framework, which is presented in the following subsection.

The final stage of this study involved the development of the Financial Decision Intelligence (FDI) framework through an iterative process of theoretical integration and conceptual abstraction. Building upon the synthesized literature, this stage aimed to explain how previously fragmented theoretical perspectives could be integrated into a unified framework describing the transformation of traditional financial modelling into an AI-enabled organizational decision capability.

Framework development was guided by the principle that conceptual advancement requires not only identifying recurring themes but also establishing meaningful relationships among theoretical constructs (Jaakkola, 2020; Torraco, 2005). Accordingly, constructs identified throughout the Integrative Literature Review were systematically organized into an internally coherent explanatory model capable of explaining AI-enabled financial decision-making from a strategic management perspective.

The framework was developed through three interconnected analytical activities. First, core constructs consistently identified across the literature—including Artificial Intelligence, financial modelling, AI-enabled analytics, managerial judgement, strategic decision-making, organizational learning, and organizational capability—were conceptually refined according to their respective roles in organizational financial decision processes. Second, conceptually related constructs originating from different disciplinary perspectives were comparatively synthesized to eliminate theoretical overlap and improve conceptual clarity. For example, business intelligence, financial analytics, predictive analytics, and decision support systems were integrated as complementary manifestations of AI-enabled Analytics, whereas managerial cognition, executive judgement, and strategic interpretation were synthesized as dimensions of Managerial Judgement. Third, these refined constructs were integrated into a higher-order conceptual architecture representing the proposed Financial Decision Intelligence framework.

Within the proposed framework, Financial Modelling functions as the analytical foundation that structures financial information, AI-enabled Analytics serves as the intelligence engine that generates analytical insights, Managerial Judgement acts as the interpretative



mechanism through which analytical outputs are evaluated, and Strategic Decision-Making represents the organizational outcome of intelligent financial analysis. The interaction among these four dimensions forms Financial Decision Intelligence as a dynamic organizational capability that integrates analytical modelling, computational intelligence, and managerial expertise into a unified strategic decision process.

Unlike conventional financial modelling approaches that primarily emphasize prediction and quantitative analysis, the proposed framework highlights the continuous interaction between Artificial Intelligence and managerial judgement in generating adaptive financial decisions. Consequently, Financial Decision Intelligence extends existing strategic management literature by explaining how AI contributes not only to analytical performance but also to organizational learning, strategic adaptability, and sustainable competitive advantage.

The resulting framework provides the theoretical foundation for the discussion presented in the following section, where each dimension of Financial Decision Intelligence is examined in greater depth. Furthermore, it establishes a basis for future empirical research aimed at operationalizing Financial Decision Intelligence as a measurable organizational capability and evaluating its influence on strategic decision quality, organizational resilience, innovation capability, and long-term organizational performance.

The iterative process of conceptual integration described above resulted in the development of the Financial Decision Intelligence (FDI) framework. Figure 2 presents the proposed conceptual architecture, illustrating how Financial Modelling, AI-enabled Analytics, Managerial Judgement, and Strategic Decision-Making interact to form Financial Decision Intelligence as an integrated organizational capability. This framework serves as the analytical foundation for the subsequent discussion of each conceptual dimension presented in the following section.

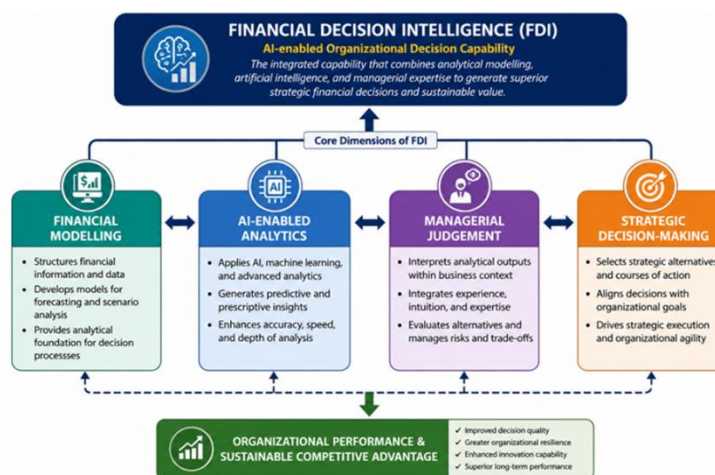


Figure 2. Proposed Financial Decision Intelligence (FDI) Conceptual Framework

Note: Solid arrows indicate primary influence, while dashed arrows indicate continuous feedback and dynamic interaction among dimensions.

Figure 2 illustrates the theoretical architecture developed through the Integrative Literature Review. The framework positions Financial Modelling as the analytical foundation, AI-enabled Analytics as the intelligence engine, Managerial Judgement as the interpretative mechanism, and Strategic Decision-Making as the organizational outcome. Rather than representing a linear process, the framework illustrates a dynamic interaction among these dimensions that collectively generates Financial Decision Intelligence as a higher-order organizational capability.

## RESULTS AND DISCUSSION

### Financial Decision Intelligence Framework

The principal contribution of this study is the development of the Financial Decision Intelligence (FDI) Framework, which provides an integrated conceptual explanation of how Artificial Intelligence enhances organizational financial decision-making within the broader context of strategic management. Rather than treating financial modelling, AI-enabled analytics, managerial judgement, and strategic decision-making as independent organizational functions, the proposed framework explains how these dimensions operate as complementary components of a unified organizational capability. In doing so, the framework shifts the focus of financial decision-making from isolated analytical activities toward the continuous creation

of strategic financial intelligence.

Figure 2 illustrates the conceptual architecture of Financial Decision Intelligence. Unlike linear decision models that portray financial analysis as a sequence of independent activities, the proposed framework emphasizes the dynamic interaction among four interrelated dimensions: Financial Modelling, AI-enabled Analytics, Managerial Judgement, and Strategic Decision-Making. These dimensions should be understood as mutually reinforcing organizational capabilities that collectively transform financial information into strategic organizational intelligence rather than as discrete procedural stages.

The first dimension, Financial Modelling, provides the analytical foundation of the framework by organizing financial information into structured representations that support organizational analysis. Within Financial Decision Intelligence, however, financial modelling performs a broader strategic function than conventional forecasting or valuation techniques. It establishes the analytical environment upon which intelligent interpretation, predictive learning, and strategic reasoning can subsequently emerge. Consequently, the value of financial modelling lies not only in producing quantitative estimates but also in enabling the generation of reliable organizational intelligence.

The second dimension, AI-enabled Analytics, serves as the intelligence engine that enriches financial models through adaptive learning, predictive reasoning, and multidimensional data integration. Rather than replacing conventional financial analysis, AI expands its capability by identifying complex relationships, generating explainable analytical insights, and continuously refining predictions as organizational knowledge evolves. Accordingly, AI functions as an enabling mechanism that transforms structured financial information into actionable strategic intelligence.

The third dimension, Managerial Judgement, functions as the interpretative mechanism that converts analytical intelligence into organizational action. Although AI substantially strengthens computational capability, strategic decisions remain dependent upon managers' contextual understanding, professional experience, ethical evaluation, and strategic reasoning. Within the proposed framework, managerial judgement therefore complements computational intelligence by validating analytical outputs, reconciling organizational priorities, and ensuring that AI-generated recommendations remain aligned with broader strategic objectives.

The fourth dimension, Strategic Decision-Making, represents the organizational outcome produced through the interaction of the preceding dimensions. Financial intelligence generated through analytical modelling, AI-enabled analytics, and managerial judgement supports investment decisions, resource allocation, risk management, strategic planning, and organizational adaptation. More importantly, the framework conceptualizes strategic decision-making as a continuous organizational capability through which financial intelligence contributes to resilience, innovation, and sustainable competitive advantage rather than merely supporting isolated financial choices.

A distinguishing characteristic of the proposed framework is its continuous organizational learning cycle. Strategic decisions generate new organizational knowledge that continuously improves financial models, enhances AI learning capability, enriches managerial understanding, and strengthens future decision quality. This recursive relationship indicates that Financial Decision Intelligence is not a static decision-support system but a dynamic organizational capability that evolves through continuous interaction between analytical systems and managerial learning. Such adaptive capability enables organizations to respond more effectively to environmental uncertainty while continuously improving strategic decision quality.

Overall, the Financial Decision Intelligence Framework extends existing perspectives on AI-enabled decision-making by integrating analytical capability, intelligent technologies, managerial cognition, and organizational learning within a single conceptual architecture. Rather than viewing Artificial Intelligence solely as a technological innovation, the framework positions AI as a strategic enabler that supports the continuous creation of strategic financial intelligence. Consequently, Financial Decision Intelligence provides a higher-order theoretical perspective explaining how organizations transform financial information into intelligent strategic decisions in increasingly complex business environments.

### **Financial Modelling as the Analytical Foundation of Financial Decision Intelligence**

Within the proposed Financial Decision Intelligence (FDI) framework, Financial

Modelling is reconceptualized from a conventional analytical technique into the analytical foundation of an integrated organizational decision capability. Traditional financial modelling has long been recognized as an essential instrument for forecasting, investment appraisal, valuation, budgeting, capital allocation, scenario analysis, and financial risk assessment. The proposed framework extends this conventional perspective by arguing that financial modelling creates the structured analytical environment upon which Artificial Intelligence and managerial judgement jointly generate strategic financial intelligence.

Conventional financial models were developed primarily for relatively stable organizational environments characterized by periodic reporting, structured financial information, and deterministic analytical assumptions. Spreadsheet-based modelling, discounted cash flow analysis, financial ratio analysis, and statistical forecasting have provided managers with reliable quantitative tools for evaluating organizational performance. However, these approaches increasingly face limitations in digitally connected business environments where organizations must process heterogeneous, real-time, and continuously evolving information originating from multiple internal and external sources.

The digital transformation of organizations has fundamentally altered the nature of financial information. Contemporary financial intelligence is generated not only through accounting systems but also through enterprise platforms, customer interactions, supply chain networks, Internet of Things (IoT) devices, digital transactions, social media, and external market intelligence. As organizational information becomes increasingly multidimensional, financial modelling must evolve beyond static numerical representation toward an adaptive analytical capability capable of integrating diverse information into a coherent decision environment. This transformation reflects a fundamental shift in the strategic role of financial modelling within organizational decision-making.

Within Financial Decision Intelligence, financial modelling therefore performs a broader function than producing financial projections. It organizes financial knowledge into structured analytical representations that enable AI-enabled Analytics to identify complex relationships, generate predictive and prescriptive insights, and support scenario evaluation. In this sense, financial modelling provides the essential analytical architecture through which intelligent financial analysis becomes possible. Consequently, the strategic value of financial modelling depends not only on analytical accuracy but also on its capability to support organizational learning, knowledge integration, and evidence-informed managerial judgement.

This reconceptualization also changes how financial models are interpreted within strategic management. Rather than functioning as isolated computational tools, financial models become organizational knowledge structures that continuously evolve through feedback from managerial decisions, changing business conditions, and AI-assisted learning mechanisms. Each strategic decision generates new organizational knowledge that refines subsequent modelling activities, creating a recursive cycle of analytical improvement and organizational learning. Financial modelling therefore becomes an adaptive knowledge infrastructure that supports continuous strategic adaptation rather than a one-time analytical exercise.

The effectiveness of the entire Financial Decision Intelligence framework ultimately depends on the quality of this analytical foundation. AI-enabled Analytics requires well-structured financial models to generate reliable insights, while Managerial Judgement depends upon analytical outputs that are accurate, interpretable, and contextually meaningful. Likewise, Strategic Decision-Making reflects the integrity of the analytical processes that precede it. Weaknesses in financial modelling therefore propagate throughout the remaining dimensions of Financial Decision Intelligence, reinforcing its role as the cornerstone of intelligent financial decision capability.

Overall, the proposed framework repositions financial modelling from a technical function of corporate finance into the analytical foundation of Financial Decision Intelligence. By integrating structured financial knowledge with Artificial Intelligence and managerial judgement, financial modelling becomes the mechanism through which organizations transform financial information into strategic organizational intelligence. This conceptualization extends existing literature by embedding financial modelling within a broader organizational capability that supports adaptive, evidence-informed, and strategically aligned decision-making.

### **AI-enabled Analytics: From Financial Data to Strategic Intelligence**

Within the proposed Financial Decision Intelligence (FDI) framework, AI-enabled Analytics functions as the intelligence engine that transforms structured financial information

into actionable strategic intelligence. Unlike conventional financial analytics, which primarily emphasizes descriptive reporting and quantitative evaluation, AI-enabled Analytics continuously integrates heterogeneous data, identifies complex relationships, generates predictive and prescriptive insights, and refines analytical outputs through adaptive learning. Consequently, its strategic value lies not merely in improving computational performance but in expanding the organization's capability to generate timely, evidence-based financial intelligence that supports managerial decision-making.

The emergence of Artificial Intelligence has fundamentally expanded the analytical capacity of financial decision systems. Machine learning, deep learning, natural language processing, and generative AI enable organizations to process large volumes of structured and unstructured information originating from financial reports, enterprise resource planning systems, customer transactions, market intelligence, regulatory information, social media, and other digital platforms. Through continuous learning, AI identifies hidden patterns, detects anomalies, anticipates emerging risks, and supports the evaluation of multiple strategic scenarios that would be difficult to analyze using conventional analytical approaches.

Within Financial Decision Intelligence, however, AI-enabled Analytics is not conceptualized as an autonomous decision-maker. Rather, it serves as an organizational intelligence capability that enriches financial models by generating explainable analytical insights capable of supporting managerial interpretation. The objective is therefore not to replace managerial expertise but to strengthen analytical reasoning through more comprehensive, timely, and contextually relevant financial information. This perspective distinguishes Financial Decision Intelligence from technology-centric approaches that primarily emphasize automation or algorithmic performance.

Another important contribution of AI-enabled Analytics lies in its ability to connect previously isolated organizational information. Traditional financial analysis often relies on historical accounting data and predefined analytical assumptions. In contrast, AI continuously integrates internal and external information into a unified analytical environment, allowing organizations to evaluate financial performance within broader strategic, operational, and environmental contexts. Consequently, financial intelligence evolves from retrospective reporting toward continuous organizational sensing and strategic foresight.

The interaction between AI-enabled Analytics and Financial Modelling further strengthens the analytical capability of the proposed framework. Financial models provide structured analytical representations, whereas AI enriches these representations through adaptive learning, multidimensional pattern recognition, predictive modelling, and intelligent scenario simulation. This complementary relationship enables organizations to move beyond static financial forecasting toward continuously evolving strategic analysis. Accordingly, AI-enabled Analytics should be understood as an enabling mechanism that amplifies, rather than substitutes for, the analytical value of financial modelling.

The effectiveness of AI-enabled Analytics ultimately depends upon its interaction with Managerial Judgement, the third dimension of Financial Decision Intelligence. Analytical insights acquire strategic value only when interpreted within organizational objectives, environmental conditions, stakeholder interests, and ethical considerations. Consequently, AI-generated recommendations become meaningful not because algorithms are capable of making strategic decisions independently, but because they support managers in evaluating alternatives, reducing uncertainty, and improving decision quality through evidence-informed reasoning.

Overall, AI-enabled Analytics extends the role of Artificial Intelligence beyond computational efficiency by positioning AI as an organizational intelligence capability that continuously transforms financial information into strategic knowledge. Within Financial Decision Intelligence, AI functions as the analytical bridge connecting financial models with managerial interpretation, thereby enabling organizations to strengthen strategic adaptability, organizational learning, and evidence-based decision-making in increasingly complex business environments.

### **Managerial Judgement: Strategic Interpretation within Financial Decision Intelligence**

Within the proposed Financial Decision Intelligence (FDI) framework, Managerial Judgement functions as the strategic interpretative mechanism that transforms analytical intelligence into organizational action. Although Artificial Intelligence substantially enhances computational capability and analytical accuracy, strategic financial decisions ultimately depend on managers' ability to interpret analytical outputs within broader organizational, environmental,



and ethical contexts. Accordingly, Managerial Judgement bridges the gap between AI-generated insights and strategic organizational action by integrating analytical evidence with human experience, professional expertise, contextual understanding, and organizational objectives.

The growing adoption of AI has significantly improved organizations' capability to generate predictive, prescriptive, and real-time financial insights. Nevertheless, strategic decision-making extends beyond computational optimization. Organizational decisions frequently involve ambiguity, conflicting stakeholder interests, regulatory considerations, ethical dilemmas, and long-term strategic consequences that cannot be fully represented through algorithmic analysis alone. Consequently, managerial judgement remains indispensable because it enables decision makers to evaluate analytical recommendations within complex organizational realities rather than relying solely on statistical accuracy.

Within Financial Decision Intelligence, managerial judgement is therefore conceptualized not as a substitute for Artificial Intelligence, but as a complementary capability that enhances the strategic value of AI-generated intelligence. Managers contribute contextual reasoning, organizational knowledge, ethical evaluation, industry experience, and strategic intuition that enable analytical outputs to be translated into appropriate organizational actions. This complementary relationship illustrates that intelligent financial decision-making emerges through collaboration between computational intelligence and human judgement rather than through the dominance of either component.

Managerial judgement also plays a critical role in validating analytical outputs before they are translated into strategic decisions. AI-generated recommendations may contain analytical bias, incomplete contextual information, or assumptions that require human evaluation. Through critical interpretation and professional assessment, managers determine whether analytical recommendations are consistent with organizational priorities, stakeholder expectations, regulatory requirements, and acceptable levels of strategic risk. Accordingly, managerial judgement strengthens the reliability, transparency, and accountability of AI-assisted financial decision-making.

Another important contribution of managerial judgement lies in its interaction with organizational learning. Strategic decisions generate feedback regarding the effectiveness of previous analytical assumptions, managerial interpretations, and AI-generated recommendations. This organizational feedback continuously improves managerial expertise while simultaneously providing new knowledge that refines financial models and AI-enabled Analytics. Consequently, Managerial Judgement functions not only as an interpretative capability but also as a mechanism through which organizational learning strengthens the adaptive capacity of Financial Decision Intelligence over time.

The interaction between AI-enabled Analytics and Managerial Judgement therefore represents one of the principal distinguishing characteristics of the proposed framework. Rather than advocating algorithmic decision-making, Financial Decision Intelligence emphasizes human-centered intelligence augmentation in which Artificial Intelligence supports, informs, and enriches managerial reasoning without replacing managerial responsibility. This perspective is consistent with strategic management, where sustainable competitive advantage depends not only on technological capability but also on leaders' ability to interpret information, exercise sound judgement, and align decisions with long-term organizational objectives.

Overall, the proposed framework positions Managerial Judgement as the interpretative core of Financial Decision Intelligence. By integrating computational intelligence with contextual reasoning, ethical evaluation, and strategic interpretation, managerial judgement transforms analytical outputs into informed organizational decisions. Consequently, Financial Decision Intelligence should be understood not as an AI-driven decision system, but as a collaborative organizational capability in which Artificial Intelligence and managerial expertise jointly generate superior strategic financial decisions.

### **Strategic Decision-Making: The Organizational Outcome of Financial Decision Intelligence**

Within the proposed Financial Decision Intelligence (FDI) framework, Strategic Decision-Making represents the organizational outcome generated through the interaction of Financial Modelling, AI-enabled Analytics, and Managerial Judgement. Unlike conventional approaches that frequently separate financial analysis from managerial interpretation, Financial Decision Intelligence conceptualizes strategic decisions as the result of continuous interaction between analytical intelligence and human reasoning. Consequently, decision quality depends

not only on analytical accuracy but also on the organization's ability to transform financial information into actionable strategic knowledge.

Strategic decisions increasingly take place in environments characterized by uncertainty, rapid technological change, market volatility, regulatory complexity, and growing stakeholder expectations. Under these conditions, organizations require more than accurate financial forecasts; they require adaptive decision capabilities that integrate real-time information, predictive insights, contextual interpretation, and strategic learning. Financial Decision Intelligence responds to this challenge by enabling managers to evaluate strategic alternatives through continuously updated financial intelligence rather than relying solely on historical information or static analytical assumptions.

Within this framework, strategic decision-making is viewed as a dynamic organizational process rather than a single managerial event. Financial models provide structured analytical representations, AI-enabled Analytics generates predictive and prescriptive insights, and Managerial Judgement evaluates these insights in light of organizational objectives, environmental conditions, ethical considerations, and stakeholder expectations. The interaction among these dimensions enables organizations to make financial decisions that are analytically rigorous, contextually appropriate, and strategically aligned.

An important implication of Financial Decision Intelligence is its capacity to improve organizational adaptability. As organizations continuously acquire new information and evaluate the outcomes of previous strategic decisions, both financial models and AI-enabled Analytics are progressively refined through organizational learning. This adaptive feedback mechanism allows decision quality to improve over time, strengthening organizational resilience and enhancing responsiveness to changing business environments. Accordingly, Financial Decision Intelligence should be understood as a continuously evolving organizational capability rather than a static decision-support system.

The proposed framework also broadens the strategic role of financial decision-making beyond traditional financial performance. Intelligent financial decisions influence investment priorities, resource allocation, innovation strategies, risk governance, digital transformation, and long-term organizational sustainability. Consequently, financial intelligence becomes a strategic organizational resource that supports value creation across multiple managerial functions rather than serving only as an instrument for financial control.

From a strategic management perspective, Financial Decision Intelligence provides a conceptual explanation of how organizations develop superior decision capability through the integration of analytical modelling, computational intelligence, and managerial interpretation. Sustainable competitive advantage therefore arises not simply from the adoption of Artificial Intelligence, but from the organization's capability to combine technological intelligence with managerial expertise in support of consistent, evidence-informed strategic decisions. This perspective reinforces the argument that AI creates organizational value when embedded within broader managerial and strategic processes.

Overall, Strategic Decision-Making represents the culmination of the Financial Decision Intelligence framework. The proposed model demonstrates that high-quality strategic decisions emerge through the complementary interaction of financial modelling, AI-enabled Analytics, and Managerial Judgement rather than through isolated analytical activities. By integrating these dimensions into a coherent organizational capability, Financial Decision Intelligence extends existing strategic management literature and offers a new conceptual perspective on how Artificial Intelligence enhances organizational decision quality in the digital economy.

## **Discussion**

The proposed Financial Decision Intelligence (FDI) framework provides a broader perspective on AI-enabled organizational decision-making by integrating financial modelling, AI-enabled analytics, managerial judgement, and strategic decision-making into a unified organizational capability. While previous studies have extensively demonstrated that Artificial Intelligence improves forecasting accuracy, financial analytics, fraud detection, investment evaluation, and business intelligence, most of these studies examine AI from a functional or technology-oriented perspective. The present framework extends this body of knowledge by explaining how these analytical capabilities interact to support strategic financial decision-making at the organizational level. Rather than positioning AI as an isolated technological solution, Financial Decision Intelligence conceptualizes AI as a strategic capability embedded

within organizational decision processes.

This conceptualization also addresses the theoretical fragmentation identified in the literature review. Previous research has generally treated financial modelling, business intelligence, financial analytics, decision support systems, and managerial decision-making as separate streams of inquiry. Although each perspective contributes valuable insights, they provide only partial explanations of how organizations transform financial information into strategic intelligence. By integrating these complementary perspectives into a single conceptual framework, Financial Decision Intelligence offers a more comprehensive explanation of AI-enabled financial decision capability and demonstrates how analytical modelling, computational intelligence, and managerial expertise jointly contribute to organizational performance.

An important implication of the proposed framework concerns the evolving role of managerial judgement in the age of Artificial Intelligence. Consistent with the augmentation perspective in strategic management, the findings suggest that AI does not replace managerial decision-makers but strengthens their capability to interpret increasingly complex organizational information. Financial models and AI-generated analytics provide evidence-based recommendations, whereas managers contribute contextual understanding, ethical evaluation, organizational experience, and strategic reasoning. Consequently, superior strategic decisions emerge from the complementary interaction between computational intelligence and human judgement rather than from algorithmic automation alone.

The framework further reinforces the argument that sustainable competitive advantage increasingly depends on an organization's capability to transform financial information into strategic intelligence. From a strategic management perspective, this capability extends beyond technological adoption and requires continuous organizational learning, adaptive analytical capability, and effective integration of AI within managerial processes. Accordingly, Financial Decision Intelligence should be understood as a dynamic organizational capability that continuously evolves through feedback generated from strategic decisions, thereby improving subsequent financial modelling, AI-enabled analytics, and managerial judgement.

Overall, the proposed framework advances existing strategic management literature by shifting the focus from AI as a technological resource toward AI as an enabler of intelligent organizational decision capability. This perspective complements existing research while providing a stronger theoretical explanation of how organizations create value through the continuous interaction of analytical modelling, intelligent technologies, managerial expertise, and strategic decision-making. The framework therefore establishes a coherent conceptual foundation for future empirical studies investigating the organizational outcomes of Financial Decision Intelligence across diverse industrial and institutional contexts.

### Theoretical Implications

The proposed Financial Decision Intelligence (FDI) framework contributes to strategic management literature by offering a new conceptual perspective on how Artificial Intelligence enhances organizational financial decision capability. While previous studies have primarily examined AI in relation to financial forecasting, business analytics, decision support systems, or digital transformation, this study demonstrates that these perspectives represent complementary rather than independent streams of knowledge. By integrating them into a unified conceptual framework, Financial Decision Intelligence provides a broader theoretical explanation of AI-enabled financial decision-making within organizations.

The first theoretical contribution lies in the reconceptualization of financial modelling. Existing literature generally positions financial modelling as a quantitative analytical instrument supporting forecasting, valuation, and investment analysis. The proposed framework extends this view by conceptualizing financial modelling as the analytical foundation of an organizational decision capability. This perspective shifts the emphasis from computational outputs toward the generation of strategic financial intelligence through the interaction of analytical modelling, AI-enabled Analytics, and Managerial Judgement.

The second contribution concerns the integration of previously fragmented theoretical perspectives. Rather than treating Artificial Intelligence, financial analytics, business intelligence, decision support systems, and managerial decision-making as separate domains, the proposed framework synthesizes these complementary concepts into a coherent explanation of organizational financial decision capability. This integration provides a stronger theoretical foundation for understanding how AI creates organizational value beyond

improvements in analytical efficiency alone.

A third contribution is the positioning of Managerial Judgement as an essential component of AI-enabled financial decision-making. In contrast to technology-centered perspectives that emphasize algorithmic performance, Financial Decision Intelligence argues that strategic value emerges through the complementary interaction between computational intelligence and human interpretation. This perspective reinforces the view that Artificial Intelligence augments, rather than replaces, managerial expertise and highlights the continuing importance of contextual reasoning, ethical evaluation, and strategic judgement in organizational decision processes.

More broadly, the proposed framework extends strategic management theory by conceptualizing Financial Decision Intelligence as a higher-order organizational capability. Sustainable competitive advantage is therefore explained not simply by the adoption of AI technologies, but by an organization's ability to integrate analytical modelling, intelligent analytics, managerial judgement, and organizational learning into a continuous strategic decision process. This capability-oriented perspective offers a new theoretical lens for examining AI-enabled organizational adaptation and long-term value creation.

Finally, the study establishes a conceptual foundation for future empirical research. The Financial Decision Intelligence framework can be operationalized into measurable constructs to examine its relationship with strategic decision quality, organizational resilience, innovation capability, financial performance, and sustainable competitive advantage. Consequently, the proposed framework contributes not only to conceptual theory development but also provides a platform for advancing empirical research on AI-enabled strategic financial management.

### **Practical Implications**

Beyond its theoretical contributions, the proposed Financial Decision Intelligence (FDI) framework offers practical guidance for organizations seeking to integrate Artificial Intelligence into financial decision-making. Rather than adopting AI solely to automate analytical tasks, the framework encourages organizations to develop an integrated decision capability in which financial modelling, AI-enabled Analytics, Managerial Judgement, and Strategic Decision-Making operate as complementary components of a unified managerial process. This perspective emphasizes that organizational value is created not by technology alone, but by the effective integration of analytical intelligence and human expertise.

For organizational leaders, the framework provides a structured reference for designing AI-enabled financial governance. Managers are encouraged to position financial modelling as the analytical foundation, employ AI-enabled Analytics to generate timely and explainable insights, and strengthen Managerial Judgement through contextual interpretation, ethical evaluation, and strategic reasoning. Such integration enables organizations to improve decision quality while maintaining transparency, accountability, and managerial responsibility throughout the decision process.

The proposed framework also has important implications for digital transformation initiatives. Many organizations invest substantially in AI technologies but fail to realize their expected strategic benefits because technological implementation is not accompanied by organizational capability development. Financial Decision Intelligence suggests that successful AI adoption requires coordinated investment in analytical infrastructure, data governance, managerial competencies, organizational learning, and decision processes. Consequently, digital transformation should be viewed not merely as technological modernization but as the development of intelligent organizational decision capability.

From a financial management perspective, the framework supports a broader interpretation of financial decision-making. Financial intelligence generated through FDI can assist organizations in investment evaluation, capital budgeting, enterprise risk management, resource allocation, performance management, and long-term strategic planning. Because the framework integrates analytical modelling with adaptive intelligence and managerial interpretation, organizations are better positioned to respond to environmental uncertainty while improving the consistency and quality of strategic financial decisions.

The framework is equally relevant for policymakers, professional organizations, and higher education institutions responsible for developing future managerial capabilities. The growing integration of AI into organizational finance requires educational programs and professional training that combine financial expertise, data analytics, managerial judgement,



ethical governance, and strategic thinking. Accordingly, Financial Decision Intelligence provides a conceptual basis for designing interdisciplinary curricula and executive development programs that prepare managers to work effectively alongside intelligent technologies.

Finally, the proposed framework offers practical guidance for organizations at different stages of AI maturity. Rather than prescribing a universal implementation model, Financial Decision Intelligence provides a flexible conceptual architecture that can be adapted to diverse organizational contexts, industries, and levels of digital readiness. This adaptability increases the practical relevance of the framework while reinforcing its potential to support sustainable organizational performance in increasingly complex and data-intensive business environments.

The discussion further indicates that the organizational value of Artificial Intelligence is realized not through algorithmic automation alone but through its integration with managerial judgement and continuous organizational learning..

## CONCLUSION

This study set out to develop an integrated conceptual framework explaining how Artificial Intelligence transforms traditional financial modelling into a higher-order organizational capability for strategic financial decision-making. Through an Integrative Literature Review, the study achieved this objective by proposing the Financial Decision Intelligence (FDI) framework, which explains that intelligent financial decision-making emerges from the dynamic interaction among Financial Modelling, AI-enabled Analytics, Managerial Judgement, and Strategic Decision-Making. Rather than viewing Artificial Intelligence merely as a technological tool for improving analytical accuracy, the proposed framework positions AI as a strategic capability that enhances managerial cognition, organizational learning, and evidence-based financial decision-making.

The study further demonstrates that the strategic value of Artificial Intelligence does not arise solely from computational efficiency or predictive capability. Instead, organizational competitiveness increasingly depends on the capability to transform financial information into strategic financial intelligence through the complementary interaction of intelligent technologies and managerial expertise. By integrating previously fragmented perspectives from financial modelling, financial analytics, business intelligence, decision support systems, and strategic management, Financial Decision Intelligence provides a more comprehensive explanation of AI-enabled financial decision capability than existing function-oriented approaches. This synthesis extends the understanding of financial modelling from a technical analytical instrument to a dynamic organizational capability that continuously evolves through organizational learning and adaptive decision-making.

The principal contribution of this study lies in introducing Financial Decision Intelligence (FDI) as a novel conceptual framework that unifies analytical modelling, AI-enabled analytics, managerial judgement, and strategic decision-making within a single organizational capability. This higher-order perspective enriches strategic management literature by providing a coherent theoretical explanation of how organizations create sustainable value through intelligent financial decisions rather than through isolated AI applications. In addition to its theoretical contribution, the framework offers practical guidance for managers seeking to strengthen strategic financial governance, improve organizational adaptability, and support evidence-based decision-making in increasingly data-intensive business environments.

This study has several limitations. As a conceptual study, the proposed framework has not yet been empirically validated, and the relationships among its dimensions remain theoretically derived. Furthermore, although the Integrative Literature Review incorporated multidisciplinary literature, the framework may not fully capture contextual variations across industries, organizational characteristics, or different levels of Artificial Intelligence maturity.

Future research is encouraged to operationalize Financial Decision Intelligence into measurable constructs and empirically examine its influence on strategic decision quality, organizational resilience, innovation capability, financial performance, and sustainable competitive advantage across diverse organizational contexts. Further studies may also investigate the roles of AI governance, explainable AI, responsible AI, and human-AI collaboration in strengthening Financial Decision Intelligence and refining its applicability across industries.

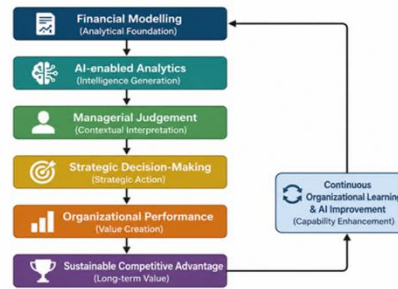


Figure 3. Overall Financial Decision Intelligence (FDI) Capability Framework

Figure 3 synthesizes the overall conceptual logic of the proposed Financial Decision Intelligence (FDI) framework. It illustrates that intelligent financial decision-making is not a linear process but a continuous organizational capability in which Financial Modelling, AI-enabled Analytics, Managerial Judgement, and Strategic Decision-Making collectively enhance organizational performance and sustainable competitive advantage through continuous organizational learning and AI improvement. This integrative capability cycle reinforces the dynamic nature of Financial Decision Intelligence, demonstrating how strategic learning continuously strengthens future analytical capability, managerial judgement, and organizational decision quality.

Overall, Financial Decision Intelligence provides a new conceptual lens for understanding AI-enabled strategic financial management. The proposed framework demonstrates that superior organizational decisions emerge not from Artificial Intelligence alone, but from the effective integration of analytical capability, intelligent technologies, managerial judgement, and continuous organizational learning. As organizations continue to operate in increasingly data-intensive and uncertain environments, Financial Decision Intelligence offers a theoretical foundation for future empirical research while providing practical guidance for developing intelligent, adaptive, and strategically aligned financial decision capabilities.

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