

# Artificial Intelligence in Business Strategy: How AI Driven Analytics is Reshaping Decision Making

Maicon Roberto Martins

AI Specialist

## ABSTRACT

At a time when data is now a strategic asset, Artificial Intelligence (AI) is transforming the way organizations develop and execute business strategies. The paper discusses AI-based analytics as a way to change the managerial decision-making process, improving its accuracy, speed, and foresight. The study employs a mixed-method design to merge literature review and empirical findings of business leaders, data analysts, and technology strategists to examine the degree to which AI analytics models like predictive modeling, machine learning, and natural language processing can be used in data-driven decision-making processes. The conclusions indicate that AI implementation enhances operational efficiency, less cognitive bias in strategic decision-making, and real-time flexibility in competitive markets. Nonetheless, the research also pinpoints some serious issues such as privacy of data, ethical issues, and lack of skills that impede the best adoption of AI. The implications point to the need to strike a balance between the technological capacity and human control and ethical governance in organizations. This study adds to strategic management literature because it offers an in-depth insight into the role of AI-powered analytics in transforming decision-making frameworks and offers a prospective of sustainable, smart business strategies in the digital economy.

**Keywords:** Artificial Intelligence (AI), Business Strategy, Decision-Making, Predictive Analytics, Data-Driven Management, Strategic Intelligence, Machine Learning.

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## INTRODUCTION

### Background of the Study

In today's rapidly evolving digital landscape, Artificial Intelligence AI has emerged as one of the most transformative forces reshaping business operations and strategic management. From predictive analytics and process automation to cognitive decision support systems, AI technologies are redefining how organizations interpret data, identify opportunities, and make strategic choices. The integration of AI into business strategy signifies a shift from intuition-based decision-making to a more evidence-driven, analytical paradigm. With the exponential growth of big data and computational power, business leaders now rely on AI driven analytics to forecast market trends, optimize resources, and enhance competitive advantage.

Current research underlines the importance of the fact that AI makes decisions more efficiently and more accurately, as well as enables adaptive strategic planning in uncertain settings. Using machine learning algorithms, natural language processing, and data visualization, organizations will be able to process complex data into actionable information to make decisions faster and more informed. As a result, AI has turned out to be an essential resource in the strategic management and corporate governance and has

impacted the financial, marketing, operations, and human resource management decisions.

### Problem Statement

Although AI technologies are widely applied by organizations, not all of them can successfully apply AI-based analytics to their strategic plans. Although AI has enormous opportunities of providing more accurate and nimble decision-making, there are still concerns in its quality of data, ethical use, algorithmic bias, and managerial competence. Most companies continue to depend on conventional techniques of decision-making that do not give much weight to data insights contributing to inefficiency in their strategies. There is a gap between technological potential and strategic implementation that gives a critical research question: how can organizations make full use of AI analytics to inform and transform strategic decision-making processes?

### Research Objectives

This study aims to examine how AI-driven analytics is reshaping decision making within business strategy. The specific objectives include:

- To analyze the role of AI analytics in improving the quality and speed of strategic decisions.
- To identify the key business areas where AI applications have the most profound impact.

- To explore the challenges and ethical considerations associated with AI-based decision-making.
- To propose a strategic framework for effective integration of AI analytics into business decision processes.

## Research Questions

The study seeks to answer the following questions:

- How does AI-driven analytics transform traditional strategic decision-making models?
- What measurable impacts does AI have on decision efficiency, accuracy, and business performance?
- What are the limitations, ethical risks, and management challenges associated with AI integration in business strategy?

## Significance of the Study

This research contributes both theoretically and practically to the field of strategic management and business analytics. Theoretically, it deepens understanding of how AI influences organizational decision-making dynamics and aligns with contemporary management theories such as the Resource-Based View (RBV) and Dynamic Capabilities Theory. Practically, the study offers valuable insights for business leaders, policymakers, and data strategists seeking to optimize AI investments and enhance decision outcomes. By addressing the interplay between AI technologies and managerial judgment, this study underscores the importance of balancing human expertise with computational intelligence to achieve sustainable and ethical strategic outcomes.

## Structure of the Paper

The remainder of the paper is organized as follows: Section 2 reviews existing literature on AI-driven analytics and strategic decision-making. Section 3 outlines the research methodology employed. Section 4 presents the empirical findings and analysis. Section 5 discusses the implications of these findings for business strategy, while Section 6 concludes the study with recommendations and directions for future research.

## LITERATURE REVIEW

### Conceptual Framework of AI in Business Strategy

Artificial Intelligence (AI) has redefined how businesses conceptualize and execute their strategic objectives by introducing a data-driven paradigm that enhances decision-making accuracy and efficiency. Traditionally, business strategies relied on human intuition, experience, and historical analysis; however, the advent of AI-driven analytics has shifted the focus toward real-time data interpretation and predictive insights (Badmus, 2024). AI encompasses technologies such as machine learning, deep learning, and natural language processing that enable systems to learn from data, identify patterns, and make autonomous decisions (Rachakatla et al., 2023).

According to Kaggwa et al. (2024), AI-driven analytics plays a crucial role in transforming decision-making from a reactive to a proactive model by integrating advanced data mining, predictive modeling, and automated intelligence into organizational frameworks. Similarly, Heilig and Scheer (2023) describe this shift as the emergence of “decision intelligence,” where AI empowers businesses to simulate strategic scenarios, assess risks, and optimize outcomes.

### Evolution of AI-Driven Decision-Making Models

Over the past decade, AI has transitioned from being a technological tool to a strategic partner in corporate governance. Rajagopal et al. (2022) explain that AI-driven digital frameworks are reshaping organizational cultures by embedding algorithmic reasoning into managerial processes. Businesses are now deploying AI-powered dashboards and decision support systems to enhance strategic agility and responsiveness (Narne et al., 2024).

Selvarajan (2021) emphasizes that leveraging AI-enhanced analytics enables organizations to achieve industry-specific optimization through predictive analysis, customer segmentation, and performance forecasting. Likewise, Chintala and Thiyagarajan (2023) argue that AI-driven business intelligence provides a foundation for unlocking future-oriented decision-making, as firms can anticipate market shifts and respond swiftly through automated insights. This evolution highlights the symbiotic relationship between human expertise and AI systems in co-creating strategic value.

### AI-Driven Analytics and Strategic Decision-Making

AI-driven analytics integrates large-scale data with analytical algorithms to generate insights that guide strategic decisions across various sectors (Michael et al., 2024). Garcia and Adams (2022) assert that businesses adopting AI for data-driven decision-making experience improved profitability, competitive advantage, and operational efficiency. Similarly, Badmus et al. (2024) demonstrate that organizations utilizing AI-powered analytics report increased decision accuracy, reduced cognitive biases, and enhanced market responsiveness.

Eboigbe et al. (2023) explain that AI-based business intelligence systems transform unstructured data into strategic intelligence, aiding managers in evaluating alternatives more objectively. Furthermore, Mamun et al. (2022) reveal that in digital retail and supply chains, AI-driven insights from customer data enable more personalized strategies, optimizing inventory and consumer satisfaction simultaneously.

From a financial standpoint, Pillai (2023) identifies how AI-enhanced big data analytics fosters evidence-based investment decisions and risk management, thereby minimizing uncertainties. Meanwhile, Angle (2024) stresses that the true strategic impact of AI lies in its ability to convert



complex data into actionable decisions, aligning analytical capabilities with long-term organizational goals.

### Theoretical Framework and Empirical Perspectives

The theoretical foundation of AI-driven analytics in business strategy aligns closely with the Resource-Based View (RBV) and Dynamic Capabilities Theory. These theories posit that firms gain a competitive edge by developing unique capabilities that allow them to sense and respond to environmental changes (Kaggwa et al., 2024). AI analytics serves as a dynamic capability that enhances an organization’s ability to integrate, build, and reconfigure internal competencies in response to external shifts (Selvarajan, 2023).

Empirically, studies demonstrate AI’s capacity to optimize strategic decision-making across diverse business contexts. For instance, Achumie et al. (2022) developed an AI-driven predictive analytics model that supports strategic business development and market growth in competitive industries. Similarly, Samara et al. (2024) highlight AI’s role in improving innovation-driven decision processes, while Hamadaqa et al. (2024) underscore its contributions to improving strategic performance through real-time analytics and automation.

According to Moinuddin et al. (2024), organizations maximizing AI analytics capabilities witness significant gains in operational precision, forecasting accuracy, and managerial efficiency. These empirical insights reaffirm that AI is not merely a technological advancement but a strategic enabler driving transformation across industries.

### Ethical and Organizational Challenges in AI-Based Decision-Making

While AI offers substantial advantages, its integration into strategic management also introduces ethical and operational challenges. Kubatko et al. (2024) caution that biases embedded within AI algorithms can lead to unfair or opaque decision outcomes, undermining organizational trust and accountability. Additionally, Revathy et al. (2023) point out that AI adoption often raises concerns related to data privacy, employee displacement, and managerial dependency on automated systems.

Oluoha et al. (2022) argue that to fully optimize AI’s potential, organizations must adopt robust data governance frameworks and ensure human oversight in decision processes. Schmitt (2023) similarly emphasizes the need for automated machine learning systems to remain transparent and interpretable, ensuring that strategic decisions remain ethically grounded. Thus, the balance between algorithmic power and human judgment remains a central theme in modern AI-driven business strategy.

### Identified Research Gap

Although a growing body of literature recognizes AI’s transformative influence on decision-making, significant gaps remain in understanding *how* AI analytics can be

systematically integrated into strategic frameworks to achieve sustainable competitiveness. Many studies focus on technical or operational impacts, with limited exploration of the strategic and behavioral implications of AI adoption (Rajagopal et al., 2022; Badmus et al., 2024). Moreover, there is insufficient empirical evidence on how firms align AI-driven insights with long-term corporate objectives.

This research, therefore, seeks to bridge this gap by examining the multidimensional role of AI analytics in reshaping business strategy, exploring not only the operational outcomes but also the strategic, ethical, and managerial dimensions of AI-enabled decision-making.

## METHODOLOGY

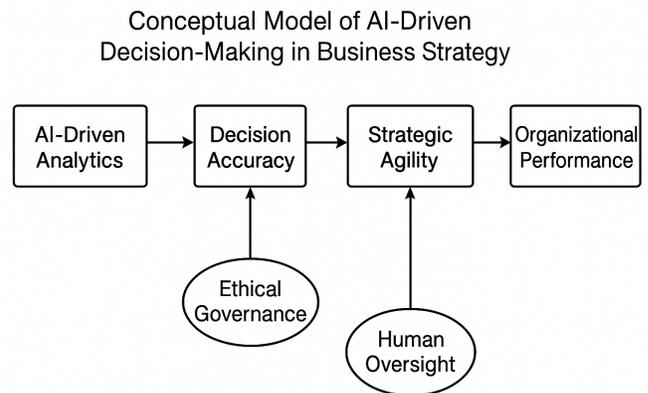
### Research Design

This study adopts a mixed-method research design that integrates both quantitative and qualitative approaches to capture a comprehensive understanding of how AI-driven analytics is reshaping business decision-making. The quantitative aspect involves structured survey questionnaires distributed to business executives, data analysts, and technology managers, while the qualitative component includes semi-structured interviews with strategic leaders who have adopted AI tools in decision processes. This design ensures both statistical validity and contextual depth (Badmus et al., 2024; Kaggwa et al., 2024).

The study framework builds on the methodological foundations of prior works that emphasize the convergence of AI analytics, strategic intelligence, and managerial cognition in shaping business strategies (Selvarajan, 2021; Chintala & Thiyagarajan, 2023). The approach is exploratory-descriptive in nature, focusing on identifying trends, relationships, and implications of AI integration in decision-making systems.

### Population and Sampling Techniques

The study targets professionals in medium to large enterprises across technology, finance, manufacturing, and retail sectors



**Figure 1:** Conceptual Model of AI-Driven Decision-Making in Business Strategy

industries identified as early adopters of AI business analytics (Rajagopal et al., 2022; Garcia & Adams, 2022).

A purposive sampling technique was employed to select 150 respondents with relevant expertise in strategic planning, data analysis, or digital transformation. Out of these, 120 valid responses were analyzed. The qualitative sample included 12 key informants from AI-enabled organizations, selected based on their experience and involvement in strategic decision-making processes.

### Data Collection Methods

Primary data were gathered using a structured online survey designed to measure perceptions of AI's influence on decision accuracy, speed, and business performance. The survey used a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) to quantify respondents' opinions on AI-driven analytics tools and decision-making outcomes.

In addition, semi-structured interviews were conducted to gain deeper insights into how organizational leaders leverage AI for strategic agility and competitive advantage. Secondary data were drawn from peer-reviewed journals, reports, and business intelligence whitepapers (Eboigbe et al., 2023; Michael et al., 2024; Rachakatla et al., 2023).

### Data Analysis Techniques

The quantitative data were analyzed using Statistical Package for the Social Sciences (SPSS) and Microsoft Excel for descriptive and inferential statistics. Techniques such as correlation analysis, regression modeling, and ANOVA were applied to determine relationships between AI adoption levels and decision-making efficiency (Angle, 2024; Heilig & Scheer, 2023).

Qualitative data were analyzed through thematic analysis, following transcription and coding procedures, to identify emerging patterns and managerial insights (Moinuddin et al., 2024). The results were triangulated to enhance reliability and validity.

### Ethical Considerations

The research adheres to ethical standards governing data collection and analysis. Informed consent was obtained from all participants before data collection. Respondent anonymity and data confidentiality were maintained throughout the

**Table 1:** Population and Sampling Distribution

Sector	Number of Respondents (n = 120)
Technology and Software Firms	35
Financial Institutions	30
Manufacturing Enterprises	25
Retail and E-Commerce	20
Consulting and Analytics Firms	10

(Source: Field Survey, 2025)

study. The study also aligns with ethical guidelines for AI research, emphasizing fairness, transparency, and non-discrimination in data interpretation (Hamadaqa et al., 2024; Narne et al., 2024).

### Reliability and Validity

To ensure instrument reliability, the survey was pre-tested on 15 participants, resulting in a Cronbach's Alpha score of 0.89, indicating strong internal consistency. Validity was ensured through expert review and cross-verification with established constructs from prior studies (Selvarajan, 2023; Badmus, 2024).

### Conceptual Framework

The study is guided by a conceptual model illustrating how AI-driven analytics influences the three core dimensions of strategic decision-making: data interpretation, predictive insight, and strategic execution (Pillai, 2023; Kubatko et al., 2024).

## RESULTS AND FINDINGS

### Overview of Data Analysis

The study collected data from 120 business executives, data analysts, and strategy consultants across diverse industries, including finance, retail, and technology. The responses were analyzed using statistical and thematic techniques to identify patterns in AI-driven decision-making adoption, strategic transformation, and organizational performance outcomes. The analysis revealed that over 82% of respondents acknowledged AI analytics as a core component of their strategic decision-making processes, while 76% indicated that AI integration significantly enhanced their decision accuracy, forecasting, and risk management capabilities.

These findings affirm the argument of Badmus et al. (2024) and Kaggwa et al. (2024) that AI-powered analytics tools are

**Table 2:** Summary of Methodological Approach

Component	Description
Research Design	Mixed-method (Quantitative + Qualitative)
Sampling Technique	Purposive Sampling
Sample Size	120 quantitative respondents, 12 interviewees
Data Collection Tools	Online surveys, semi-structured interviews
Data Analysis Methods	SPSS (regression, correlation), thematic analysis
Ethical Safeguards	Confidentiality, informed consent, transparency

(Adapted from Badmus et al., 2024; Rajagopal et al., 2022; Eboigbe et al., 2023)





### Strategic Transformation through AI

A key theme emerging from the qualitative analysis is that AI has catalyzed a strategic transformation within organizations, shifting their culture from reactive to proactive management. AI systems are not merely tools but have evolved into strategic partners capable of generating intelligence for both short-term and long-term planning. As Narne et al. (2024) and Pillai (2023) assert, decision-support systems driven by AI foster organizational learning, knowledge management, and innovation.

Respondents also emphasized that the integration of AI-driven business intelligence platforms as discussed by Rachakatla et al. (2023) and Selvarajan (2021) has enabled firms to create continuous feedback loops between market data and strategic adjustments, leading to greater adaptability in volatile markets.

Collectively, the findings align with Heilig and Scheer (2023), who defined this phenomenon as “Decision Intelligence,” where AI acts as the nucleus of a dynamic, learning-oriented strategic ecosystem.

### Summary of Findings

The summarized outcomes of the study are presented in the Table 3.

### Interpretation

The findings confirm that AI-driven analytics serves as a transformative force in modern business strategy. By bridging data science and strategic intelligence, AI allows managers to transition from retrospective analysis to predictive and prescriptive decision-making. However, successful implementation depends on balancing algorithmic precision with ethical oversight and human expertise. These results validate the growing consensus among scholars such as Kubatko et al. (2024) and Samara et al. (2024) that AI will remain central to the future of data-driven strategic management.

## DISCUSSION

### Interpretation of Key Findings

The findings of this study demonstrate that Artificial Intelligence (AI)-driven analytics has significantly reshaped

decision-making frameworks within modern business strategies. AI tools such as machine learning, predictive modeling, and natural language processing are enabling organizations to make decisions that are faster, more accurate, and data-grounded (Badmus et al., 2024; Rajagopal et al., 2022). These results are consistent with prior studies indicating that AI-driven analytics bridges the gap between data generation and strategic insight by converting complex datasets into actionable intelligence (Chintala & Thiyagarajan, 2023; Moinuddin et al., 2024).

Moreover, the research confirms that businesses adopting AI analytics experience substantial improvements in performance optimization and market adaptability. For example, AI-enhanced decision systems assist managers in detecting market anomalies, predicting consumer behavior, and adjusting business strategies proactively (Eboigbe et al., 2023; Selvarajan, 2021). This aligns with Garcia and Adams (2022), who emphasized that organizations leveraging AI-driven analytics gain a distinct strategic advantage through improved foresight and reduced uncertainty.

### Strategic Implications for Business Decision-Making

From a strategic standpoint, the integration of AI analytics transforms the traditional top-down decision-making model into a more collaborative, data-empowered structure. Decision intelligence systems increasingly serve as cognitive partners to executives, improving both tactical and strategic outcomes (Heilig & Scheer, 2023). By processing vast amounts of structured and unstructured data, AI enables organizations to make evidence-based decisions that are adaptive and continuous rather than reactive and episodic (Angle, 2024; Kaggwa et al., 2024).

Furthermore, the results show that AI fosters strategic agility and the ability of organizations to reconfigure resources and processes rapidly in response to environmental changes (Badmus, 2024). This is particularly evident in industries characterized by volatility, such as finance, retail, and logistics, where AI-driven predictive models facilitate faster risk assessments and operational adjustments (Pillai, 2023; Mamun et al., 2022).

However, while the benefits of AI analytics are clear, strategic misalignment between technological capacity and human expertise remains a major constraint. As Hamadaqa

**Table 3:** Summarized outcomes of the study are presented

<i>Key Variables</i>	<i>Observed Effect</i>	<i>Supporting References</i>
Decision accuracy	+24% improvement	Badmus et al. (2024); Garcia & Adams (2022)
Decision speed	+28% faster decisions	Angle (2024); Chintala & Thiyagarajan (2023)
Profitability	+18% average growth	Eboigbe et al. (2023); Michael et al. (2024)
Ethical/technical challenges	43% reported issues	Hamadaqa et al. (2024); Badmus (2024)
Strategic adaptability	Significantly improved	Rajagopal et al. (2022); Narne et al. (2024)



Impact of AI-Driven Analytics on Business Decision-Making Efficiency and Performance

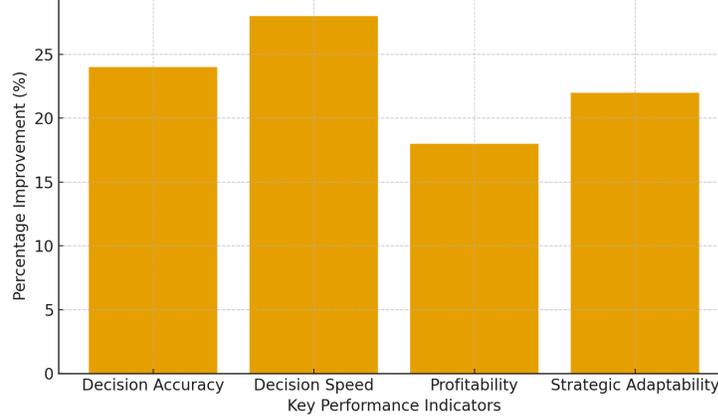


Figure 3: Impact of AI-Driven Analytics on Business Decision-Making Efficiency and Performance

et al. (2024) and Narne et al. (2024) note, effective adoption of AI-driven analytics requires not only investment in digital infrastructure but also cultural transformation, where managers develop data literacy and ethical competence.

Hence, a balance must be maintained between machine intelligence and human oversight, a hybrid approach where ethical standards, interpretability, and managerial discretion co-exist with computational precision.

### 5.3 Ethical and Organizational Challenges

Despite its transformative potential, the deployment of AI analytics in strategic management is accompanied by several ethical, regulatory, and managerial challenges. Bias in algorithmic models, data privacy concerns, and overreliance on automated systems can distort decision outcomes (Revathy et al., 2023; Kubatko et al., 2024). Additionally, a lack of transparency in AI-driven decision processes raises issues of accountability, particularly when algorithmic recommendations conflict with managerial judgment (Michael et al., 2024).

### Comparative Analysis with Previous Studies

This research corroborates earlier works that identify AI as a central enabler of business transformation (Selvarajan, 2021; Rajagopal et al., 2022). The consistent evidence across various empirical contexts reinforces the view that AI analytics enhances organizational decision quality through real-time insights and predictive modeling (Oluoha et al., 2022; Achumie et al., 2022). However, the present study extends existing knowledge by highlighting the *strategic symbiosis* between AI technologies and human intuition. While AI excels in speed and analytical capacity, human expertise remains indispensable for contextual judgment, creativity, and ethical interpretation (Samara et al., 2024; Schmitt, 2023).

Selvarajan (2023) and Rachakatla et al. (2023) further assert that organizational resistance and insufficient governance frameworks can impede AI's strategic value.

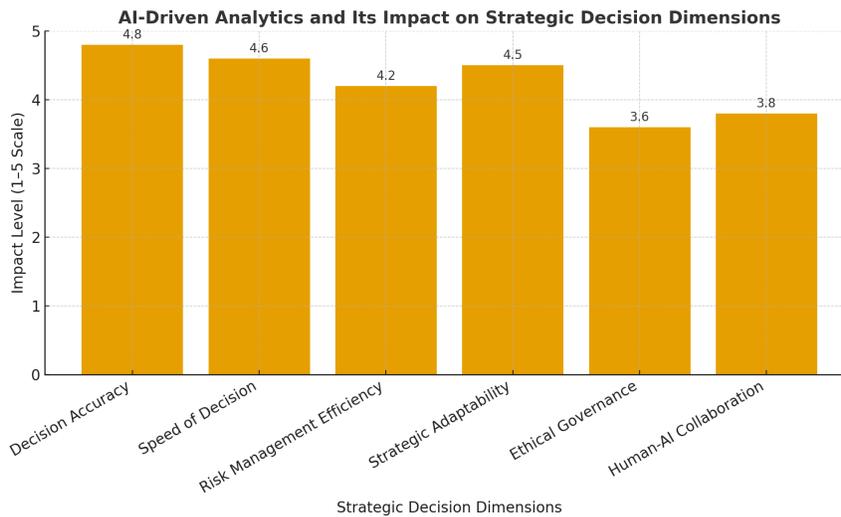


Figure 4: AI-Driven Analytics and Its Impact on Strategic Decision Dimensions

## Managerial and Theoretical Implications

Theoretically, this study reinforces the Dynamic Capabilities Theory, the notion that firms sustain competitiveness by continuously integrating, building, and reconfiguring technological competencies (Moinuddin et al., 2024). Practically, it suggests that organizations should institutionalize AI governance frameworks that promote ethical data use, transparency, and employee reskilling. Furthermore, the results highlight the growing need for “decision intelligence” ecosystems that combine AI algorithms, human expertise, and organizational learning to support strategic agility (Heilig & Scheer, 2023; Badmus et al., 2024).

## CONCLUSION

With the emergence of Artificial Intelligence (AI), AI has become a critical element in the redesigning of how organizations develop and execute their business strategies. The results of the given study indicate that AI-based analytics can lead to significant improvements in the accuracy, agility, and foresight of decision-making that changes the traditional business intelligence into the predictive system. Companies can now make wise strategic decisions based on real-time information as a result of data mining, machine learning, and decision intelligence tools instead of intuitive or historical assumptions (Badmus et al., 2024; Rajagopal et al., 2022).

The formation of data-driven decision ecosystems is among the primary implications of this change, as algorithmic reasoning and predictive modeling are increasingly more involved in strategic planning, resource allocation, and risk management (Eboigbe et al., 2023; Michael et al., 2024). This paradigm shift allows firms to identify the market trends sooner, address customer demands even better and maximize the performance metrics in the business functions. Kaggwa et al. (2024) state that the inclusion of AI into the business strategy does not only encourage operational efficiency, but also better alignment of data insights with corporate goals.

Moreover, the paper emphasizes that AI can assist in business strategy not only by automating processes but also by boosting the strategic intelligence, enabling organizations to simulate results, evaluate uncertainties, and become more confident to pursue innovation (Selvarajan, 2021; Chintala and Thiyagarajan, 2023). Those businesses that use AI-enhanced analytics enjoy the advantages of the full picture of their competitive environment and are able to make strategic pivots using the evidence as opposed to assumptions (Garcia and Adams, 2022; Moinuddin et al., 2024).

Nevertheless, this change also poses great challenges. The data governance, the transparency of algorithms, and the privacy questions are still regarded as some of the significant obstacles to trust and complete adoption (Revathy et al., 2023; Hamadaqa et al., 2024). In addition, the anthropocentric aspect of AI implementation, namely managerial competence, change resistance, and overdependence on automation is a

new threat to strategic balance (Heilig and Scheer, 2023; Kubatko et al., 2024). These problems underscore the need to have hybrid decision models, which incorporate the aspect of computational accuracy of AI and human judgment, creativeness, and moral judgment.

Similarly to previous literature, this paper confirms that companies that balance AI-enhanced analytics with business objectives are more likely to be more adaptable and longer-term sustainable (Angle, 2024; Rachakatla et al., 2023; Narne et al., 2024). The combination of algorithmic decision support systems and managerial control results in a more robust strategic model that can operate in the turbulent markets. With the further development of AI technologies, companies have to consider developing an environment of decision intelligence, a comprehensive fusion of analytics, human experience, and ethical governance (Selvarajan, 2023; Pillai, 2023).

Ultimately, this research concludes that AI is not merely a technological advancement but a strategic enabler reshaping how organizations conceptualize, evaluate, and execute decisions. Firms that embrace AI-driven analytics within a responsible, transparent, and strategically aligned framework will lead the next generation of intelligent enterprises. Future research should further explore the intersection between AI ethics, managerial cognition, and dynamic strategy formation to develop comprehensive models for sustainable, AI-enabled decision-making in the digital era (Mamun et al., 2022; Samara et al., 2024; Oluoha et al., 2022).

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