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Generative AI & Business Decision Making Impact on Organizational Performance

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Abstract

Generative artificial intelligence (GenAI) is increasingly influencing business decision-making by supporting information analysis, strategic planning, problem-solving, and operational management. This review examines the role of GenAI in business decisions and its potential impact on organizational performance. It explores how AI-supported decision-making can improve productivity, decision speed, resource utilization, innovation, and customer service. The review also considers challenges associated with inaccurate outputs, data privacy, algorithmic bias, employee trust, and organizational integration. Existing literature suggests that GenAI can enhance decision-making effectiveness when combined with human judgment, employee training, reliable information, and appropriate governance mechanisms. However, its benefits vary according to task complexity, organizational capabilities, and the quality of AI-generated recommendations. The review highlights the importance of responsible implementation and continuous performance monitoring to translate GenAI adoption into sustainable organizational improvements and long-term competitiveness.

Keywords: *Generative Artificial Intelligence; Business Decision-Making; Organizational Performance; Human–AI Collaboration; AI Integration..*

INTRODUCTION

Generative artificial intelligence (GenAI) is emerging as an important technology in modern business management because of its ability to generate content, process information, identify patterns, and support complex tasks. Organizations are increasingly exploring its use to improve managerial activities, streamline business processes, and respond to changing market conditions [1]. Effective and timely decision-making is essential for organizational success, as it influences resource allocation, operational efficiency, innovation, customer satisfaction, and long-term competitiveness. However, business decisions often involve large volumes of information, uncertainty, time constraints, and rapidly changing customer expectations [2], [3].

GenAI offers opportunities to address these challenges by supporting information analysis, generating alternative solutions, assisting with forecasting, and improving strategic planning. It can help managers interpret business information, explore potential outcomes, and make more informed decisions. Its contribution to organizational performance, however, depends on the accuracy of generated information, the quality of available data, appropriate implementation, and human supervision. Excessive reliance on AI-generated outputs may also create risks related to inaccurate information, bias, and data security [4], [5].

This review examines the role of GenAI in business decision-making and its potential impact on organizational performance. It focuses on decision-making applications, performance-related outcomes, implementation challenges, and strategies for responsible integration. The review aims to clarify how organizations can use GenAI to support better decisions and achieve improvements in productivity, efficiency, innovation, and overall business performance.

ROLE OF GENERATIVE AI IN BUSINESS DECISION-MAKING

Generative artificial intelligence (GenAI) is transforming business decision-making by helping managers process information, explore alternatives, and develop solutions to organizational problems. It can summarize reports, extract relevant information from large datasets, identify emerging patterns, and convert complex business information into understandable insights. These capabilities can reduce the time required for preliminary analysis and enable managers to focus more on evaluating options and setting business priorities [6][7].

GenAI also supports strategic planning and market analysis by generating business scenarios, examining customer feedback, identifying potential market trends, and assisting in the development of marketing strategies. In customer relationship management, it can help organizations understand customer preferences and identify areas for improving products and services [8]. Similarly, its analytical support can assist managers in comparing resource allocation options, identifying operational requirements, and considering alternative approaches to achieving organizational objectives. However, the usefulness of these outputs depends on the quality of the input information and the ability to verify the accuracy of AI-generated recommendations [9].

Another important contribution of GenAI is its ability to generate multiple solutions and support scenario-based decision-making. Managers can use these outputs to compare possible strategies, anticipate potential challenges, and assess the implications of different business choices. Nevertheless, GenAI should function as a decision-support tool rather than an independent replacement for managerial judgment [10]. Human–AI collaboration remains essential because managers must consider organizational goals, practical constraints, ethical responsibilities, and contextual factors that AI systems may not fully understand. By combining the information-processing capabilities of GenAI with human experience and critical thinking, organizations can strengthen decision-making processes and improve the basis for strategic and operational decisions [11].

IMPACT OF GENERATIVE AI-SUPPORTED DECISIONS ON ORGANIZATIONAL PERFORMANCE

Generative artificial intelligence (GenAI)-supported decision-making can influence organizational performance by improving the speed of information processing, supporting managerial judgments, and identifying opportunities for operational improvement. Its impact extends beyond individual tasks to decision quality, innovation, and overall business effectiveness. However, the extent of these benefits depends on how effectively organizations integrate GenAI into their existing processes and verify its outputs [12], [13].

- **Operational Performance:** GenAI can improve employee productivity, accelerate task completion, and reduce the time required for routine activities. These improvements may enhance process efficiency and allow employees to focus on more complex responsibilities.
- **Decision Performance:** By summarizing information and generating alternative solutions, GenAI can support faster decisions and help managers evaluate different options. However, decision quality depends on the accuracy of AI-generated information and appropriate human verification.
- **Business Performance:** GenAI-supported decisions may encourage innovation, improve customer service through personalized responses, and support better resource utilization. These benefits can strengthen organizational adaptability and competitiveness.
- **Variations in Performance Outcomes:** The benefits of GenAI are not uniform across organizations. Outcomes may vary according to task complexity, employee experience, data quality, and the reliability of AI-generated outputs. Human oversight and appropriate employee training are therefore important for achieving consistent and sustainable performance improvements.

STRATEGIES FOR EFFECTIVE INTEGRATION OF GENERATIVE AI INTO BUSINESS DECISION-MAKING

Effective integration of generative artificial intelligence (GenAI) requires a structured approach that aligns its capabilities with organizational objectives and decision-making requirements. Organizations should focus on practical applications, employee preparedness, responsible use, and continuous performance evaluation. The following strategies can help businesses use GenAI effectively while minimizing potential risks [14].

• **Targeted Implementation:** Organizations should introduce GenAI into selected business processes, such as market analysis, customer service, reporting, and strategic planning, according to their specific needs and available resources.

• **Human Oversight and Verification:** Managers should review AI-generated recommendations, verify important information, and retain responsibility for significant business

decisions, particularly those involving financial, legal, or strategic consequences.

- **Employee Training and AI Literacy:** Providing employees with appropriate training can improve their ability to use GenAI tools, evaluate generated outputs, identify inaccuracies, and combine AI-based insights with professional judgment.
- **Governance and Data Protection:** Organizations should establish clear usage policies, protect confidential information, address potential biases, and define accountability for AI-supported decisions.
- **Performance Monitoring:** Businesses should regularly assess the effectiveness of GenAI through indicators such as decision accuracy, time saved, employee productivity, operational costs, and customer satisfaction. These evaluations can help identify limitations and guide improvements in implementation.

By adopting these strategies, organizations can integrate GenAI responsibly into business decision-making and improve the likelihood of achieving sustainable performance benefits.

LITERATURE REVIEW

(Nassiri & El Mzabi, 2026) [15] Recent empirical research on generative AI in businesses paints a perplexing picture: some employees seem to perform better with the same technology, while others seem to perform worse. In order to provide an explanation for this variability, this systematic review synthesises 15 research (N=15,752). We contend that one important mechanism interfering with human calibration of when to assign jobs to AI is asymmetric reliability signals, which are AI's propensity to generate uniformly confident outputs regardless of underlying correctness. According to our study, impacts differ consistently by decision phase: they are negative in choice tasks (d=-0.28), mixed in design tasks, and positive in intelligence tasks (d=+0.41). We formalise seven testable hypotheses that define the boundaries between the positive and negative effects of AI on organisational choices.

(Alghababsheh et al., 2026) [16] investigates the behavioural goals of managers to apply generative AI to SCM decision making. Using ChatGPT as a representative generative AI tool, the study uses the unified theory of acceptance and use of technology to investigate how information quality and perceived privacy affect managers' behavioural intentions to use generative AI for SCM decision-making along with its predictors (i.e., performance expectancy, effort expectancy, peer influence, and facilitating conditions). The influence of the suggested factors on managers' behavioural intentions is further examined, along with the moderating effect of individual uncertainty avoidance. Managers' behavioural intents to utilise ChatGPT for SCM decision-making are positively influenced by performance expectation, effort expectancy, enabling settings, information quality, and perceived privacy, according to a study of 241 survey responses from manufacturing company managers. For managers with higher uncertainty avoidance, however, the only factors that are more powerful in determining behavioural intents are performance expectation, enabling conditions, information quality, and perceived privacy. The study has significant ramifications for generative AI adoption theory and practice.

(S. Pratap & Prakash Kammam, 2026) [17] investigates the effectiveness of organisational decision-making in Indian IT firms in relation to the adoption of Generative AI, employee trust, and AI capability. The findings showed that by improving decision speed, data correctness, and predictive capacities, the use of generative AI greatly increases organisational decision-making efficacy. While AI capacity greatly improved organisational performance and strategic efficiency, employee trust was found to have a favourable impact on the adoption and use of AI-generated suggestions. The results also showed that companies with more employee adaptation to AI technology had superior operational performance and implementation results. The study comes to the conclusion that strategic technology management, ethical AI governance, employee training, and organisational trust are necessary for the effective integration of generative AI. By providing useful information on responsible AI integration and decision intelligence systems for IT businesses, policymakers, and technology managers, the findings advance the domains of technology management, artificial intelligence adoption, and organisational behaviour.

(Koh & Yuen, 2026) [18] Various perspectives influencing the infusion of generative artificial intelligence tools have been examined in this study, which has subsequently been linked to organisational agility and effectiveness, using the Technology-Organization-Environment framework. Surveys were used to gather data, and 615 valid replies were gathered. The data was examined using structural equation modelling, and all eleven hypotheses are validated. Additionally, the total impact analysis showed that market agility, organisational learning, and the use of generative AI technologies were the best indicators of organisational performance. These findings underscore the necessity for organisations to cultivate a positive work culture and environments that embrace the integration of generative artificial intelligence into work processes, while also encouraging employees to work in a synergistic manner. This will enable the benefits of generative artificial intelligence to be translated into tangible outcomes that satisfy stakeholders

and improve the organization's long-term competitive position.

(M.SANGEETHA et al., 2026) [19] In order to investigate three interrelated questions—what theoretical frameworks currently explain GenAI's role in managerial and strategic decision-making, how enterprises are applying GenAI in practice across functional areas, and what structural obstacles limit the translation of GenAI adoption into quantifiable business value—this paper synthesises recent academic and industry evidence, primarily from 24 sources published between 2023 and 2026. Results show that single-model assessments of strategic options are often inconsistent and biased while aggregated multi-model assessments approximate expert human judgement; that the main obstacle to enterprise value is organisational and workflow integration rather than model capability; and that GenAI performs best as an augmentation tool that aggregates and structures diverse inputs for human judgement rather than as an autonomous decision-maker. A suggested paradigm for decision integration and its consequences for executives, AI governance roles, and researchers are presented in the paper's conclusion.

(Kassa & Worku, 2025) [20] Examine how AI affects OP while taking EP's mediating function into consideration. 172 purposefully chosen workers completed an online survey using Kobo Toolbox to provide quantitative data. While EP and OP were first-order reflecting constructions, AI was modelled as a third-order formative entity. Validated multi-item surveys with a 7-point Likert scale were used to measure the variables. PLS-SEM in SMART PLS 4.1.03 was used to examine the relationship between these variables. The findings demonstrated that AI and EP, AI and OP, EP and OP, and AI on OP through EP all had positive and significant connections. Additionally, OP and AI were somewhat mediated by EP. These results align with earlier research and hypotheses, including human capital theories and the resource-based paradigm. The findings imply that employing AI and fostering a productive workplace may significantly boost an organization's success in the digital era.

(López-Solís et al., 2025) [21] The literature on using GAI in business decision-making is reviewed in this study. It evaluates its short-, moderate, and long-term impacts while taking into account how GAI and human judgement interact. In order to fully comprehend these characteristics, challenges pertaining to uncertainty, complexity, and ambiguity are analysed and the pertinent literature is explored. In situations of high uncertainty, human judgement remains essential, despite the advanced capabilities of GAI to analyse data and generate patterns, as demonstrated by the review. The findings imply that by combining the advantages of both GAI and human experience, strategic decision-making may be made more accurately and efficiently. The accuracy and efficiency of business decisions can be significantly enhanced through the implementation of GAI. But human experience and judgement are still crucial, particularly in ambiguous situations. The secret to optimising GAI's advantages is striking the correct balance between human resources and artificial intelligence.

(Rane, 2023) [22] investigates the obstacles encountered by businesses when incorporating ChatGPT and LLMs into various aspects of business management. Businesses are urged to ensure openness and fairness in their AI-driven interactions due to ethical considerations such data privacy and algorithmic biases. Additionally, these technologies help with performance analysis, employee training, and talent acquisition in human resource management, transforming HR procedures. Additionally, the study looks into how ChatGPT and related LLMs might revolutionise business processes by encouraging creativity and innovation. Employees may focus on strategic planning and innovation by automating repetitive operations in supply chain, logistics, and supply chain management, increasing operational efficiency and competitiveness. This study demonstrates the substantial influence of ChatGPT and related LLMs in a variety of business management domains. It emphasises the necessity for businesses to navigate challenges, promote ethical practices, and empower their workforce to fully leverage the potential of these technologies in an ever-evolving business landscape, while also emphasising their benefits.

DISCUSSION

The reviewed literature indicates that generative artificial intelligence can contribute to organizational performance by strengthening information processing, supporting managerial judgments, and improving operational efficiency. Findings reported by Kassa and Worku (2025) and Koh and Yuen (2026) highlight the potential relationship between AI adoption, employee productivity, organizational agility, and effectiveness. Similarly, López-Solís et al. (2025) emphasize the importance of combining AI capabilities with human judgment, particularly when business decisions involve uncertainty and complexity. However, the benefits of GenAI are not consistent across all decision-making situations. Nassiri and El Mzabi (2026) indicate that its effects may vary according to the decision phase, while Alghababsheh et al. (2026) highlight the importance of information quality, privacy, and facilitating conditions in adoption. These findings suggest that technological adoption alone may not guarantee improved performance. Organizations must also develop employee AI literacy, establish appropriate governance, and verify AI-generated recommendations.

Therefore, the impact of GenAI on organizational performance depends on effective implementation, human–AI collaboration, and alignment with organizational objectives.

CONCLUSION

Generative artificial intelligence has considerable potential to improve business decision-making and organizational performance by supporting information analysis, strategic planning, productivity, and operational efficiency. The reviewed literature suggests that its successful application depends not only on technological capabilities but also on employee preparedness, information reliability, organizational culture, and managerial supervision. GenAI can assist decision-makers in evaluating alternatives and identifying opportunities; however, human judgment remains essential for addressing uncertainty, ethical concerns, and complex business situations. Risks related to inaccurate outputs, data privacy, and algorithmic bias must also be managed through appropriate governance practices. Organizations should adopt GenAI strategically, provide employee training, and regularly evaluate its contribution using measurable performance indicators. Overall, GenAI should be viewed as a decision-support capability rather than a complete replacement for managerial expertise. Its effective and responsible integration can help organizations strengthen decision quality, improve operational outcomes, and develop sustainable competitive advantages in an increasingly digital business environment.

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