

Research on the Impact of AI-Assisted Decision-Making on Enterprise Management Efficiency and Employee Collaborative Innovation Capability

Xiang Pan

Newyork University, 383 Lafayette Street, New York, NY 10003, USA

Email: xp2227@nyu.edu

Manuscript received June 21, 2026; accepted August 23, 2026; published September 23, 2026.

Abstract—With the development of the digital economy, Artificial Intelligence (AI) has gradually become a key pillar of corporate digital transformation. This paper examines the impact of AI on management efficiency and employees' collaborative innovation capabilities from the perspectives of business management and organizational innovation, drawing on relevant corporate case studies. The research finds that AI can improve information processing efficiency, optimize decision-making processes, and promote knowledge sharing, thereby enhancing corporate management standards and innovation performance. However, its implementation still faces challenges such as data quality issues, algorithmic bias, insufficient digital literacy among employees, and information security concerns. To fully leverage its potential, enterprises should strengthen data governance and talent development while promoting the establishment of human-machine collaborative management models.

Keywords—Artificial Intelligence (AI), decision support, business management, collaborative innovation, digital transformation

I. INTRODUCTION

In recent years, the rapid development of technologies such as artificial intelligence (AI), big data, and cloud computing has driven the continuous deepening of digital transformation in enterprises (Giachino *et al.*, 2025). Consequently, AI-assisted decision-making has garnered widespread attention. Through technologies such as machine learning and data mining, AI can analyze and predict vast amounts of data, providing enterprises with more efficient and precise decision support, thereby optimizing resource allocation, reducing operational risks, and enhancing management efficiency. At the same time, corporate innovation activities increasingly rely on cross-departmental collaboration and knowledge sharing, and AI plays a positive role in facilitating information flow and strengthening team collaboration. Based on this, this paper explores the impact mechanisms and practical value of AI-assisted decision-making from the dual perspectives of corporate management efficiency and employee collaborative innovation capabilities, with the aim of providing guidance for corporate digital management practices.

II. THE IMPACT OF AI-ASSISTED DECISION-MAKING ON CORPORATE MANAGEMENT EFFICIENCY

The efficiency of business management is closely linked to the ability to obtain and process information. With the advancement of AI technology, its application in business

management has become increasingly widespread. By rapidly analyzing data on markets, customers, operations, and finance, AI can provide managers with timely and accurate decision-making support, thereby improving information processing efficiency and the quality of decisions (Mirkovski *et al.*, 2025). Take Huawei as an example: the company uses intelligent forecasting systems to analyze supply chain data in real time, providing guidance for procurement and production planning based on changes in market demand and inventory levels, thereby effectively improving operational efficiency and market responsiveness.

Furthermore, AI can optimize the allocation of corporate resources. By analyzing data requirements across different business segments, companies can allocate financial, human, and technical resources more scientifically, thereby improving resource utilization efficiency (Ferdousi *et al.*, 2026). In the field of marketing, intelligent analytics systems can identify customer needs and market potential, providing a basis for resource allocation and business strategy. At the same time, by leveraging historical data modeling and trend forecasting, companies can promptly identify potential risks and issue early warnings, thereby formulating more reasonable response strategies and enhancing their ability to cope with complex market environments and uncertainties.

III. THE ROLE OF AI-ASSISTED DECISION-MAKING IN ENHANCING EMPLOYEES' COLLABORATIVE INNOVATION CAPABILITIES

In the knowledge economy era, collaborative innovation has become a key strategy for companies to enhance their competitiveness. Advances in AI technology have provided new support for knowledge sharing and team collaboration. Through intelligent knowledge management platforms, companies can rapidly integrate and share information resources, break down information silos between departments, and improve the efficiency with which employees access and utilize knowledge (Leoni *et al.*, 2024). Take Alibaba as an example: its data-sharing platform enables employees to quickly access project materials and industry information, thereby facilitating cross-departmental collaboration.

At the same time, AI-powered collaborative office systems can optimize team communication and project management. Tencent uses a digital collaboration platform to track project progress, assign tasks, and coordinate resources, effectively improving team collaboration

efficiency and the execution of innovation projects. Furthermore, AI can help enterprises identify potential innovation opportunities by analyzing market data and user needs, providing valuable insights for product development and business optimization.

IV. CHALLENGES AND MANAGEMENT STRATEGIES FOR AI APPLICATIONS

Although AI has brought new opportunities for business management, its implementation still faces several practical challenges. Data quality is a critical factor affecting the effectiveness of AI-driven decisions; missing or distorted data can reduce the accuracy of analytical results. At the same time, since algorithmic models rely on historical data for training, improper design may lead to decision-making biases. Furthermore, some employees lack sufficient digital skills and have limited adaptability to new technologies, which can also impact the effectiveness of AI applications. As the volume of data continues to grow, issues related to information security and privacy protection must not be overlooked.

To fully leverage the management value of AI, enterprises should strengthen data governance, establish unified data management standards, and improve data quality; refine AI application guidelines and enhance algorithm transparency; intensify digital training for employees to improve their technical proficiency; and simultaneously strengthen information security systems to mitigate the risk of data breaches, thereby ensuring the effective application of AI technology.

V. CONCLUSION

AI-assisted decision-making is profoundly transforming corporate management models and innovation approaches.

Research indicates that AI can enhance corporate management efficiency by improving information processing, optimizing resource allocation, and strengthening risk management. At the same time, AI can also promote knowledge sharing, enhance team collaboration, and stimulate innovative thinking, thereby improving employees' ability to innovate collaboratively. The practices of companies such as Huawei, Alibaba, and Tencent demonstrate that AI has become a vital tool for driving corporate digital transformation and innovative development.

CONFLICT OF INTEREST

The author declares no conflict of interest.

REFERENCES

- Giachino, C., Cepel, M., Truant, E., & Bargoni, A. 2025. Artificial intelligence-driven decision making and firm performance: A quantitative approach. *Management Decision*, 63(10): 3454–3476.
- Mirkovski, K., Williams, P., Liu, L., Liu, H., & Indulska, M. 2025. An AI-Assisted Framework for Improving Innovativeness in Small Businesses: A Human–AI Collaboration Perspective. *Information Systems Journal*, 35(6): 1603–1629.
- Ferdousi, J., Shokran, M., & Islam, M. S. 2026. Designing Human–AI Collaborative Decision Analytics Frameworks to Enhance Managerial Judgment and Organizational Performance. *Journal of Business and Management Studies*, 8(1): 01–19.
- Leoni, L., Gueli, G., Ardolino, M., Panizzon, M., & Gupta, S. 2024. AI-empowered KM processes for decision-making: empirical evidence from worldwide organisations. *Journal of Knowledge Management*, 28(11): 320–347.

Copyright © 2026 by the authors. This is an open access article distributed under the Creative Commons Attribution License which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited ([CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)).