



Midocean University

Faculty of Management
Final Project 2

The Impact of Artificial Intelligence on Managerial Decision-Making in
Saudi Companies :

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The Impact of Artificial Intelligence on Managerial Decision-Making in Saudi Companies

1.1 Introduction

Artificial Intelligence (AI) has become one of the most influential technologies transforming modern organizations. AI enables businesses to analyze large volumes of data, automate routine tasks, and support managers in making more accurate and timely decisions. As organizations operate in increasingly competitive and dynamic environments, effective managerial decision-making has become essential for achieving organizational success and maintaining a competitive advantage.

In Saudi Arabia, the adoption of Artificial Intelligence has accelerated in recent years, supported by the objectives of Saudi Vision 2030, which encourages digital transformation and innovation across both public and private sectors. Many companies are investing in AI technologies to improve operational efficiency, enhance strategic planning, and support decision-making processes. However, despite the growing adoption of AI, there is still a need to understand how AI influences the quality of managerial decision-making within Saudi companies.

This study aims to examine the impact of Artificial Intelligence on managerial decision-making in Saudi companies. The findings are expected to provide valuable insights for managers and organizations seeking to utilize AI technologies to improve decision quality and organizational performance.

1.2 Problem Statement

The rapid adoption of Artificial Intelligence (AI) has significantly changed the way organizations operate and make decisions. Although many Saudi companies have begun implementing AI technologies to improve efficiency and support management processes, the extent to which AI enhances managerial decision-making remains unclear. Some organizations still face challenges related to AI implementation, such as limited technical expertise, resistance to change, data quality issues, and concerns about the reliability of AI-generated recommendations.

Moreover, there is limited research focusing specifically on the relationship between Artificial Intelligence and managerial decision-making within the context of Saudi companies.

Therefore, this study seeks to investigate whether the use of Artificial Intelligence has a significant impact on managerial decision-making and to provide evidence that may help organizations improve their decision-making processes through the effective use of AI.



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1.3 Research Objectives

The main objective of this study is to examine the impact of Artificial Intelligence on managerial decision-making in Saudi companies.

The specific objectives are:

1. To examine the level of Artificial Intelligence adoption in Saudi companies.
2. To investigate the impact of Artificial Intelligence on managerial decision-making.
3. To identify the benefits of using Artificial Intelligence in improving managerial decisions.
4. To provide recommendations for organizations on the effective use of Artificial Intelligence to enhance decision-making.

1.4 Research Questions

This study seeks to answer the following research questions:

1. What is the level of Artificial Intelligence adoption in Saudi companies?
2. How does Artificial Intelligence affect managerial decision-making in Saudi companies?
3. What are the main benefits of using Artificial Intelligence in managerial decision-making?
4. What recommendations can help organizations improve managerial decision-making through the effective use of Artificial Intelligence?

1.5 Research Hypotheses

Based on the research objectives and questions, the following hypotheses are proposed:

H1: Artificial Intelligence has a significant positive impact on managerial decision-making in Saudi companies.

H0: Artificial Intelligence has no significant impact on managerial decision-making in Saudi companies.

1.6 Significance of the Study

This study is significant because it examines the impact of Artificial Intelligence on managerial decision-making in Saudi companies. The findings will contribute to the existing knowledge on the use of AI in business management and provide practical insights for organizations seeking to improve decision-making processes.

The study is expected to benefit managers by helping them understand how AI can support effective decision-making. It may also assist organizations in developing strategies for adopting AI technologies to enhance organizational performance. In addition, the study can serve as a useful reference for future researchers interested in Artificial Intelligence and business management.



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1.7 Scope of the Study

This study focuses on examining the impact of Artificial Intelligence on managerial decision-making in Saudi companies. The target population consists of employees and managers working in different organizations within Saudi Arabia. Data will be collected through a questionnaire, and the study will focus on the relationship between Artificial Intelligence as the independent variable and managerial decision-making as the dependent variable. The findings of this study will be limited to the selected sample and the time period during which the research is conducted.

1.8 Research Model

Independent Variable -----> Managerial Decision-Making

Dependent Variable -----> Artificial Intelligence

1.9 Project Plan

This research project will be completed in several stages. First, the research topic and objectives will be identified, followed by a review of the relevant literature. Next, a questionnaire will be developed and distributed to the selected participants to collect data. The collected data will then be analyzed using appropriate statistical methods. Finally, the research findings, conclusions, and recommendations will be presented in the final report.



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Chapter Two: Literature Review

2.1 Introduction

Artificial Intelligence (AI) has become an important topic in business management due to its ability to improve organizational performance and support managerial decision-making. Many organizations have adopted AI technologies to analyze data, automate business processes, and provide accurate information that assists managers in making effective decisions. As a result, researchers have increasingly examined the relationship between AI and decision-making in different organizational contexts.

This chapter reviews the relevant literature related to Artificial Intelligence and managerial decision-making. It also discusses previous studies that have investigated the impact of AI on organizational performance and decision-making. Finally, the chapter identifies the research gap that this study aims to address.

2.2 Artificial Intelligence

Artificial Intelligence (AI) refers to the ability of computer systems to perform tasks that normally require human intelligence, such as learning, problem-solving, decision-making, and data analysis. AI technologies include machine learning, natural language processing, expert systems, and predictive analytics. These technologies enable organizations to process large amounts of data quickly and accurately, providing valuable insights that support business operations.

In modern organizations, AI is widely used to improve efficiency, reduce operational costs, enhance customer service, and support strategic planning. By providing accurate and timely information, AI helps managers make informed decisions, minimize human errors, and respond more effectively to changing business environments. As a result, AI has become an essential tool for organizations seeking to improve their competitiveness and overall performance.

2.3 Managerial Decision-Making

Managerial decision-making is the process through which managers identify problems, evaluate available alternatives, and choose the most appropriate course of action to achieve organizational objectives. Effective decision-making is essential for improving organizational performance, solving business challenges, and ensuring the efficient use of resources.

The quality of managerial decisions depends on the availability of accurate and timely information. Artificial Intelligence supports this process by analyzing large volumes of data, identifying patterns, and generating insights that help managers make better decisions. As organizations continue to adopt AI technologies, managerial decision-making has become faster, more accurate, and more data-driven, enabling organizations to respond effectively to changing business environments.



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2.4 Previous Studies

Several recent studies have examined the relationship between Artificial Intelligence (AI) and managerial decision-making. A study by Alshareef (2024) investigated the use of AI in supporting managerial decision-making in Saudi universities. The findings indicated that AI positively contributes to improving decision quality, increasing efficiency, and supporting managers with accurate and timely information. The study also emphasized the importance of ethical standards and data security when implementing AI systems.

Another study conducted by Almeshari et al. (2024) examined the application of AI in managerial decision-making at the Saudi Telecommunications Company (STC). The results showed that AI applications, including expert systems and intelligent agents, significantly improved different stages of managerial decision-making and enhanced organizational performance.

In addition, Baabdullah (2024) explored the factors influencing AI adoption in businesses and their impact on decision-making efficiency. The study concluded that organizations that successfully adopt AI technologies achieve faster and more effective managerial decisions, leading to improved organizational performance and competitiveness.

Overall, previous studies consistently demonstrate that Artificial Intelligence plays an important role in supporting managerial decision-making. However, there is still a need for further research focusing specifically on Saudi companies across different sectors, which is the focus of the present study.

2.5 Research Gap

Although previous studies have confirmed that Artificial Intelligence positively influences managerial decision-making, most of these studies focused on specific sectors or organizations. In addition, limited research has examined the impact of Artificial Intelligence on managerial decision-making across Saudi companies in general. Therefore, this study aims to fill this gap by investigating the relationship between Artificial Intelligence and managerial decision-making in Saudi companies, providing updated evidence that may support organizations in improving their decision-making processes through AI technologies.

2.6 Chapter Summary

This chapter reviewed the literature related to Artificial Intelligence and managerial decision-making. It discussed the concept of Artificial Intelligence, its role in organizations, and the importance of managerial decision-making. The chapter also reviewed previous studies and identified the research gap that this study seeks to address. The next chapter will explain the research methodology, including the research design, data collection methods, sampling procedures, and data analysis techniques.



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References

Almeshari, A., Alqahtani, M., & Alharbi, F. (2024). Applications of Artificial Intelligence in Management Decision-Making: An Applied Study on Saudi Telecommunications Company (STC). *Journal of Business and Management Studies*.

Alshareef, M. A. (2024). Artificial Intelligence and managerial decision-making in Saudi universities. *Journal of Business and Management Studies*, 6(2), 45–58.

Baabdullah, A. M. (2024). Artificial intelligence adoption in organizations: Implications for managerial decision-making and organizational performance. *Industrial Management & Data Systems*.



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Appendix A: Questionnaire

Questionnaire

Dear Participant,

I am conducting this research as part of the requirements for the Bachelor of Business Administration degree at MidOcean University.

The purpose of this questionnaire is to examine the impact of Artificial Intelligence on managerial decision-making in Saudi companies.

Your participation is voluntary, and all responses will remain confidential and will be used only for academic purposes.

Thank you for your valuable participation.

Section A: Demographic Information

Please select the appropriate answer.

1. Gender

- ☐ Male
- ☐ Female

2. Age

- ☐ Less than 25 years
- ☐ 25–34 years
- ☐ 35–44 years
- ☐ 45 years and above

3. Educational Level

- ☐ Diploma
- ☐ Bachelor's Degree
- ☐ Master's Degree
- ☐ Doctorate

4. Years of Work Experience

- ☐ Less than 5 years
- ☐ 5–10 years
- ☐ More than 10 years

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Appendix A: Questionnaire

Section B: Artificial Intelligence and Managerial Decision-Making

Please indicate your level of agreement with the following statements by selecting one answer for each statement.

Scale:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neutral
- 4 = Agree
- 5 = Strongly Agree

1. Artificial Intelligence improves the quality of managerial decision-making.

1-2-3-4-5

2. AI helps managers analyze business data more effectively.

1-2-3-4-5

3. AI reduces the time required to make managerial decisions.

1-2-3-4-5

4. AI provides accurate information that supports managerial decisions.

1-2-3-4-5

5. AI helps managers solve complex business problems.

1-2-3-4-5

6. AI improves the efficiency of organizational decision-making.

1-2-3-4-5

7. My organization encourages the use of AI in managerial decision-making.

1-2-3-4-5

8. Managers trust the information generated by AI systems.

1-2-3-4-5

9. AI contributes to improving organizational performance through better decisions.

1-2-3-4-5

10. I believe AI will become increasingly important in managerial decision-making in the future.

1-2-3-4-5



Appendix B: Research Instrument Table

Scale	Five-Point Likert Scale	Five-Point Likert Scale
Number of Items	5	5
Measurement Items	Q1 - Q5	Q6 - Q10
Type	Independent Variable	Dependent Variable
Variable	Artificial Intelligence (AI)	Managerial Decision-Making