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The Impact of Artificial Intelligence on Business Management

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Graduation Project – 1

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1. Chapter 1: Introduction

1.1. Research Background

Artificial Intelligence (AI) has become one of the most important technological developments influencing modern organizations. Businesses increasingly rely on AI technologies to improve efficiency, automate repetitive activities, and support managerial decision-making. The ability of AI systems to process large volumes of data and generate meaningful insights has transformed the way organizations operate in competitive business environments.

Over the last decade, AI has expanded from a purely technical concept into a strategic business tool. Organizations use AI applications in finance, human resources, marketing, customer service, procurement, and operations management. These applications support managers in planning activities, allocating resources, forecasting future trends, and improving organizational performance. As a result, AI has become an essential component of digital transformation initiatives across many industries.

Researchers have highlighted several benefits of AI adoption in organizations. AI technologies can improve decision quality, increase operational efficiency, reduce costs, and enhance productivity. In addition, intelligent systems can provide real-time information that assists managers in responding quickly to market changes and organizational challenges. Such capabilities allow businesses to strengthen their competitive position and improve overall performance.

Despite these advantages, the implementation of AI remains a challenge for many organizations. Difficulties related to employee acceptance, integration with existing systems, data management, and organizational readiness continue to affect successful adoption. Furthermore, while many studies have examined specific AI applications, there is still a need to understand how AI influences business management as a comprehensive managerial practice.

Therefore, this study examines the impact of Artificial Intelligence on Business Management. The study seeks to explore how AI contributes to improving managerial effectiveness, organizational efficiency, and business performance through its application across different organizational functions

1.2. Research Problem

Organizations are increasingly investing in Artificial Intelligence technologies to improve business processes and management activities. However, there is still uncertainty regarding the overall impact of AI on business management and the extent to which organizations can benefit from its implementation across different managerial functions

1.2.1 Theoretical Gaps

Previous studies have focused on Artificial Intelligence in specific areas such as automation, organizational performance, and decision-making. However, limited research has examined the overall relationship between Artificial Intelligence and Business Management as an integrated concept that includes planning, organizing, leading, and controlling.

1.2.2 Practical Gaps

Although organizations continue to adopt AI technologies, many managers face challenges related to implementation, employee adaptation, and system integration. Consequently, organizations require a better understanding of how AI can be utilized effectively to improve business management practices and organizational outcomes.

Main Research Question: What is the impact of Artificial Intelligence on Business Management?

1.3 Research Significance

This study is significant due to the growing role of Artificial Intelligence (AI) in modern organizations and its increasing impact on business management practices. As organizations continue to adopt AI technologies to improve efficiency, decision-making, and operational performance, understanding the relationship between Artificial Intelligence and Business Management has become an important area of academic and practical interest. Therefore, this study seeks to provide valuable insights into how AI can contribute to improving management functions and organizational effectiveness.

1.3.1 At the theoretical level

This study contributes to the existing literature by providing a broader understanding of the relationship between Artificial Intelligence and Business Management. It addresses gaps in previous studies and supports future research related to AI applications in management and organizational development.

1.3.2 At the practical level

The findings of this study may assist managers and organizations in understanding the potential benefits of Artificial Intelligence. The study may also support decision-makers in developing strategies that improve efficiency, productivity, and managerial effectiveness through AI adoption

1.4 Research Questions

The main research question is:

What is the impact of Artificial Intelligence on Business Management?

To provide a focused answer to the main question, the following sub-questions are proposed:

1. How does Artificial Intelligence influence managerial decision-making in organizations?
2. How does Artificial Intelligence affect operational efficiency?
3. How does Artificial Intelligence support strategic planning?
4. How does Artificial Intelligence improve coordination between business departments?
5. How does Artificial Intelligence influence organizational performance?

1.5 Research Objectives

The general objective of this study is to examine the impact of Artificial Intelligence on Business Management.

The specific objectives are:

1. To examine the impact of Artificial Intelligence on managerial decision-making.
2. To assess the impact of Artificial Intelligence on operational efficiency.
3. To investigate the role of Artificial Intelligence in supporting strategic planning.
4. To evaluate the impact of Artificial Intelligence on coordination between business departments.

5. To determine the impact of Artificial Intelligence on organizational performance.

1.6 Research Hypotheses

The hypotheses are formulated to test the relationship between Artificial Intelligence and the selected dimensions of Business Management.

Main Null Hypothesis (H0): There is no statistically significant impact of Artificial Intelligence on Business Management.

Main Alternative Hypothesis (H1): There is a statistically significant impact of Artificial Intelligence on Business Management.

The following sub-hypotheses are proposed:

1. H1a: Artificial Intelligence has a statistically significant impact on managerial decision-making.
2. H1b: Artificial Intelligence has a statistically significant impact on operational efficiency.
3. H1c: Artificial Intelligence has a statistically significant impact on strategic planning.
4. H1d: Artificial Intelligence has a statistically significant impact on coordination between business departments.
5. H1e: Artificial Intelligence has a statistically significant impact on organizational performance.

1.7 Research Model

The research model presents the expected relationship between the independent and dependent variables. Artificial Intelligence is the independent variable, while Business Management is the dependent variable. Business Management is examined through managerial decision-making, operational efficiency, strategic planning, departmental coordination, and organizational performance.

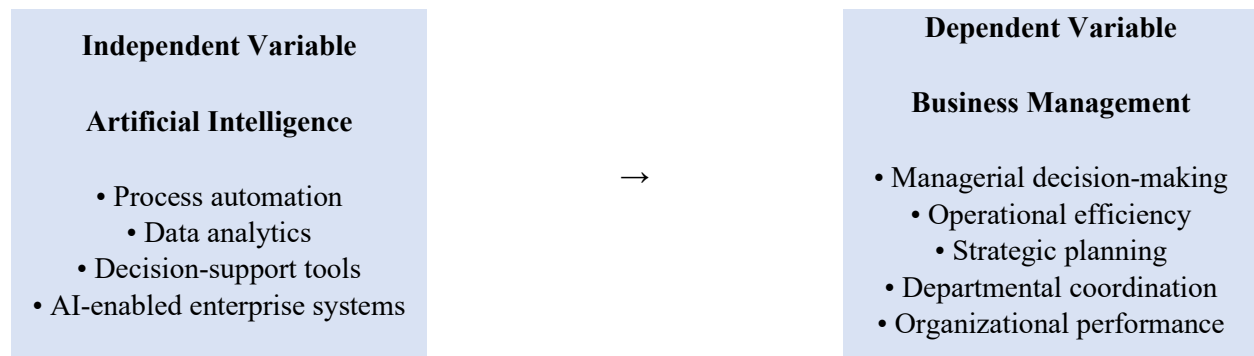


Figure 1. Proposed Research Model

1.8 Research Methodology

This section briefly explains the methodological choices that will be used to examine the relationship between Artificial Intelligence and Business Management. The choices are based on the research onion approach described by Saunders et al. (2019).

Research philosophy: The study adopts positivism because it examines an objective relationship between measurable variables and aims to produce findings that can be statistically evaluated.

Research approach: A deductive approach will be used because the study begins with hypotheses derived from existing literature and tests them using collected data.

Research strategy: A survey strategy will be applied through a structured questionnaire distributed to the selected respondents.

Research choice: The study uses a quantitative method because numerical responses will be collected and analyzed to test the research hypotheses.

Time horizon: The study is cross-sectional because the data will be collected during one defined period.

Data collection and analysis: Primary data will be collected through a questionnaire. Secondary data will be obtained from academic books and journal articles. The collected data will be analyzed using descriptive statistics, reliability analysis, correlation, and regression through SPSS.

1.9 Scope of the Study

The empirical study will focus on private-sector service organizations in Jordan that use Artificial Intelligence or AI-supported business systems. The target respondents will include managers, supervisors, and administrative employees who participate in planning, decision-making, operations, finance, human resources, procurement, marketing, or customer service. These respondents are suitable because they can evaluate how AI affects daily management practices and organizational performance.

The study will examine Artificial Intelligence as the independent variable and Business Management as the dependent variable. The empirical investigation will be limited to the selected organizations and to data collected during the period of the study.

1.10 The Suggested Project Structure

The proposed graduation project will be organized as follows:

- Chapter One: Introduction, including the research background, problem, significance, questions, objectives, hypotheses, research model, methodology, scope, and proposed structure.

- Chapter Two: Literature Review, covering Artificial Intelligence, Business Management, and the relationship between the two variables.
- Chapter Three: Research Methodology, including population, sample, questionnaire design, validity, reliability, and data-analysis procedures.
- Chapter Four: Data Analysis and Results.
- Chapter Five: Discussion, Conclusions, Recommendations, and Suggestions for Future Research.



Chapter Two: Literature Review

2.1 Introduction

This chapter reviews the literature related to Artificial Intelligence (AI) and Business Management. It explains the main concepts of both variables, their relationship, and previous studies related to the research topic. The purpose is to provide a theoretical background and support the research problem and objectives of this study.

2.2 Artificial Intelligence

Artificial Intelligence refers to technologies that allow computer systems to perform tasks that normally require human intelligence, such as analyzing information, learning, and supporting decisions. AI is increasingly used by organizations to automate activities, analyze data, and improve business processes (Davenport & Ronanki, 2018).

In business, AI can be used in finance, marketing, human resources, customer service, procurement, and operations. It can also support process automation, data analytics, decision-support tools, and enterprise systems, which are the main AI dimensions considered in this study. These applications can help organizations reduce routine work and improve efficiency (Iansiti & Lakhani, 2020).

2.3 Business Management

Business Management involves planning, organizing, leading, and controlling organizational activities to achieve business objectives. Effective management helps organizations use their resources efficiently, solve problems, and improve performance.

In this study, Business Management is examined through five areas: managerial decision-making, operational efficiency, strategic planning, departmental coordination, and organizational performance. These dimensions are consistent with the research questions, objectives, hypotheses, and research model already presented in Chapter One.

2.4 Relationship between Artificial Intelligence and Business Management

Artificial Intelligence can support Business Management by providing managers with useful information and reducing time spent on routine activities. AI can improve decision-making,

operational efficiency, planning, and coordination between departments (Wilson & Daugherty, 2018).

AI can also help organizations respond faster to changes and improve overall performance. However, its success depends on how effectively the organization integrates AI into its existing processes and how employees adapt to the technology (Dwivedi et al., 2023).

2.5 Previous Studies

Davenport and Ronanki (2018) found that organizations mainly use AI for process automation, gaining business insights, and improving customer engagement.

Wilson and Daugherty (2018) found that AI can improve organizational performance when employees and intelligent systems work together.

Iansiti and Lakhani (2020) explained that AI is changing business operations and management by helping organizations improve efficiency and compete more effectively.

Dwivedi et al. (2023) discussed the opportunities and challenges of AI and highlighted its growing importance for organizations and management.

These studies show that AI can positively influence different business activities. However, the current study examines its impact on Business Management across several management dimensions within private-sector service organizations in Jordan.

2.6 Chapter Summary

This chapter reviewed Artificial Intelligence and Business Management and explained the relationship between them. Previous studies indicate that AI can support decision-making, efficiency, planning, coordination, and organizational performance. This literature provides the theoretical basis for the current study.

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