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AI IMPACT ON DECISION MAKING

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CHAPTER 1: INTRODUCTION

1.1 Research Background

Decision making is at the heart of every management practice. Managers face choices each day about where to invest resources, which goals to pursue, and how to address risks. The quality of these decisions influences not only the success of the organization but also the satisfaction of its teams and stakeholders. As the business environment grows more uncertain and information becomes complex, managers need new ways to make smart choices.

Recent years have seen the rise of artificial intelligence (AI) tools in business. These tools can process huge amounts of data, find patterns, and suggest ideas that managers might overlook. AI helps with planning, forecasting, and making strategic

decisions. More organizations now use AI to predict sales, manage supply chains, and evaluate risks. For example, banks use AI to detect fraud, retailers use it to improve inventory, and manufacturers use it to plan production schedules (Dwivedi et al., 2021).

Studies show that AI can support managers to make faster, more accurate, and data-driven decisions (Shrestha et al., 2019; Zhang & Lu, 2022). However, using AI also changes the role of the manager. Today, managers need to learn how to combine their experience with the recommendations generated by AI systems. This shift raises new questions: How much should managers trust AI? How does AI fit with the culture and ethics of the workplace? What does it mean for responsibility and judgment?

Despite the excitement around AI, there are things still unclear. Some researchers argue that AI may not always improve decisions when managers do not fully trust the system or do not know how it works (Cerrato et al., 2023). Other studies suggest that AI can create new risks if used without enough care for ethics or company values (Rahwan et al., 2019). There is also limited research on how AI affects decision quality in places where culture and workplace trust matter.

This matters because the gap between AI technology and managers' actual use is growing. Companies invest in AI, but sometimes managers do not use it as expected. Understanding these issues is important for business schools, companies, and policymakers. This study aims to discover how AI changes decision making, what challenges managers face, and what can be done to improve outcomes. The purpose is to offer real, practical guidance about how to use AI responsibly and effectively in management.

1.2 Research Problem

AI is everywhere, and companies are using it for big decisions. However, we have a major question: **Are managers truly making *better* decisions with AI, or is this new technology just making their jobs confusing?** The main issue this research addresses is simple: We don't really understand the full picture—the human side and the company rules—that decide if AI is helpful or just a source of new mistakes.

1.2.1 Theoretical Gaps (What Research is Missing)

Most research only looks at the technical result: AI goes in, a decision comes out. They miss the most important part: **the human link**. This is a major gap in theory. Our study steps in to prove that the link isn't straight. Instead, we argue that **Managerial Trust** is the **critical bridge**. If managers trust the AI, the decision quality improves; if they don't, the AI is useless. Plus, we highlight that **Organizational Ethics** are the **non-negotiable rules** that ensure the AI's impact is fair and positive, a key factor often left out of academic models.

1.2.2 Practical Gaps (What Managers Need)

Right now, managers and leaders are flying blind. They don't have a **clear, easy-to-follow guide (a playbook)** on how to use AI tools responsibly and effectively. They need more than just the software; they need concrete steps—like training, new policies, and clear ethical checks—to feel confident and clear-headed. By focusing on the **GCC region**, where technology is growing fast, this research will provide the practical steps needed to help leaders move from nervous testing to making smart, confident, and ethical AI-powered decisions.

Main Research Question: How does using AI affect the quality of decisions in a company, when we take into account the crucial roles of a manager's trust, and the company's culture and ethics?

1.3 Research Significance

1.3.1 Theoretical Significance

This research adds to the theory by linking AI integration with decision quality and managerial trust. It uses both new studies and classic decision theory (Simon, 1977) to show how technology and human factors interact. The study explores the middle ground where technology, feelings, and workplace values combine. This helps to build more practical models of decision making in modern organizations.

1.3.2 Practical Significance

For managers, this research gives advice on how to use AI tools wisely and recognize their limits. It highlights the need to build trust and fit AI into company culture.

Companies can learn how to support managers as new technologies are adopted. The findings help leaders design AI projects that match their organizational values and avoid ethical risks. The guidance is useful for policymakers as well, who want to

ensure fair and effective deployment of AI.

1.4 Research Questions

1. What is the impact of AI integration on decision quality in organizations?
2. How does managerial trust influence the adoption and use of AI-supported decisions?
3. How do organizational culture and ethics affect the relationship between AI integration and decision quality?
4. What are the practical challenges and opportunities faced by managers when using AI in decision making?
5. How can organizations improve manager readiness and trust in AI systems?

1.5 Research Objectives

1. To assess the impact of AI integration on decision quality in organizations.
2. To examine how managerial trust affects the use of AI in decision making.
3. To analyze the influence of organizational culture and ethics on the effectiveness of AI-supported decisions.

4.To identify practical challenges and opportunities for managers adopting AI tools.

5. To recommend strategies to build manager readiness and trust for successful AI integration.

1.6 Research Hypotheses

Greater AI integration leads to higher decision quality in organizations.

Rationale: AI can process more information and find patterns quickly, which can improve the accuracy and relevance of decisions (Shrestha et al., 2019).

Managerial trust mediates the relationship between AI integration and decision quality.

Rationale: Managers who trust AI are more likely to use its suggestions, affecting decision outcomes (Cerrato et al., 2023).

Organizational culture and ethics moderate the impact of AI integration on decision quality.

Rationale: Values and norms shape how AI is accepted and used in decision processes (Rahwan et al., 2019).

Lack of manager readiness and training reduces the effectiveness of AI-supported decision making.

Rationale: Without skills and understanding, managers may misuse or ignore AI input (Dwivedi et al., 2021).

1.7 Research Model

In this study, AI integration is the independent variable. It refers to the use of AI tools to support decision making in organizations. The dependent variable is decision quality, which includes making choices that are accurate, relevant, and responsible. Managerial trust is the mediating variable, describing the confidence and belief managers have in AI outputs. Organizational culture and ethics are moderating variables. This means they change the strength and direction of how AI affects decision quality. In summary, AI integration affects decision quality directly, and its effect is influenced by managerial trust, culture, and ethical standards

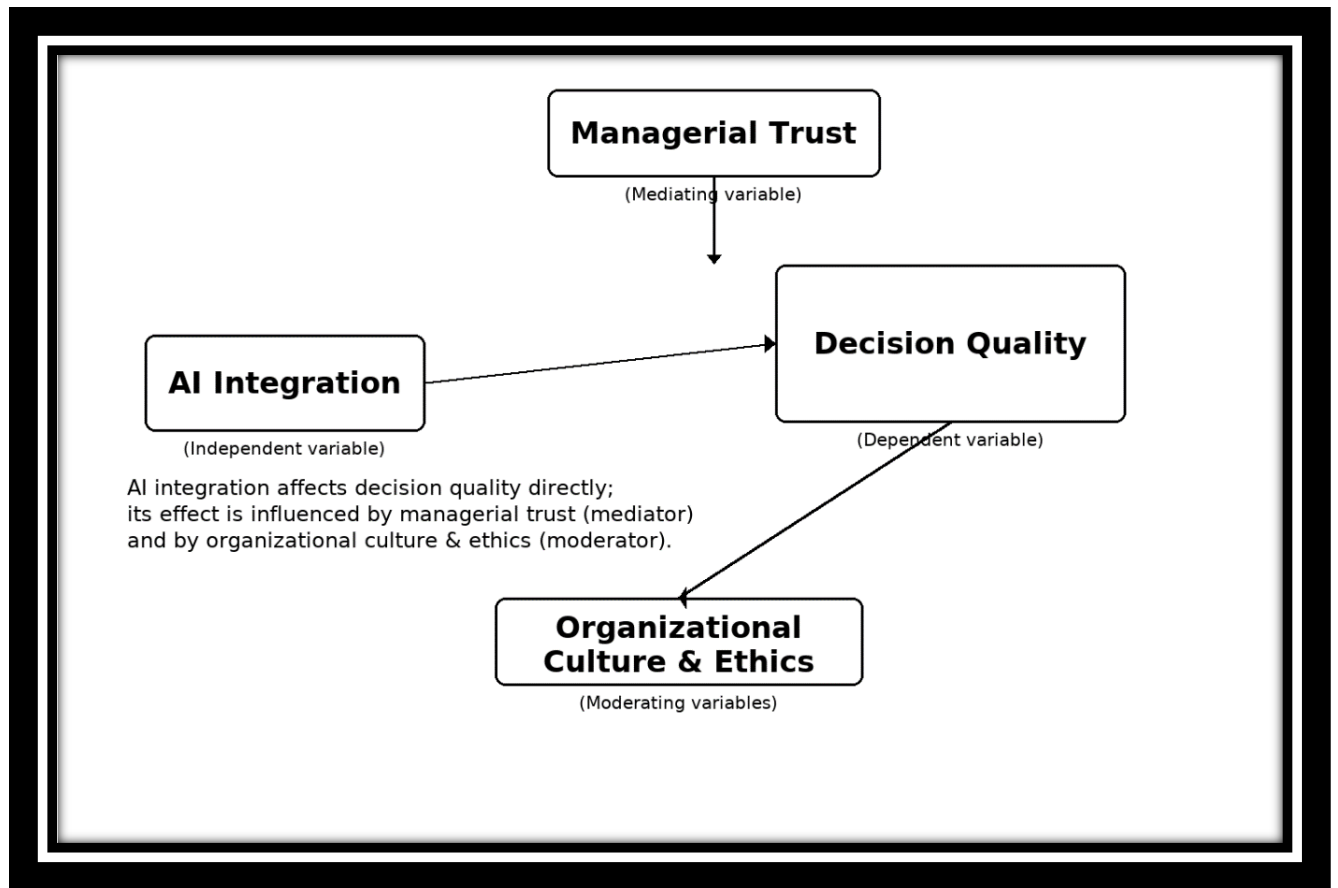


Figure 1.1: Conceptual Research Model

Conceptual Model Variables:

- AI Integration — Independent Variable (IV)
- Decision Quality — Dependent Variable (DV)
- Managerial Trust — Mediating Variable
- Organizational Culture & Ethics — Moderating Variables

1.8 Research Methodology

This study adopts a **Mixed-Methods design**, guided by the **Pragmatism** research philosophy. This approach is optimal as it combines the strength of quantitative statistical analysis with the explanatory depth of qualitative data, providing a comprehensive understanding of the complex relationships (Trust and Ethics). The research will follow a **Sequential Explanatory Design** (QUANT $\rightarrow$ QUAL).

Methodological Framework

Research Onion Layer	Choice for This Study	Justification
1. Philosophy	Pragmatism	Suitable for mixed methods, focusing on using the best tools to solve the problem.
2. Approach	Deductive $\rightarrow$ Inductive	Starts by testing hypotheses (Quantitative) and follows up by exploring context (Qualitative).
3. Strategy	Survey + Interviews	Combining structured data collection with in-depth personal insights.
4. Choice	Mixed-Methods (Sequential)	Ensures triangulation and allows qualitative data to interpret quantitative findings.
5. Time Horizon	Cross-sectional	Data collection for the quantitative phase occurs at a single point in time.

Ethical Considerations

The study strictly adheres to all research ethics guidelines. This includes obtaining **Informed Consent** from all participants, ensuring the absolute **Confidentiality** of their data and identities, and handling all collected information securely and responsibly.

1.9 Scope of the Study (Revised for Clarity)

Thematic Scope

The research is limited to analyzing the specific five variables: AI integration, decision quality, managerial trust, organizational culture, and ethics.

Geographical and Industrial Scope

The empirical study will focus on **medium and large organizations in the (GCC region)**.

Suggested Industry or Organization for the Empirical Study (In Brief):

To maximize **relevance and generalizability**, the study will target sectors with high AI adoption and complex decision-making needs. This includes the **Financial and Banking Sector** (due to high-stakes risk management), **Technology and Telecommunications Firms**, and large **Government Service Providers**. These sectors offer a rich context for observing the interplay of AI, trust, and managerial decisions.

Time Scope

The data collection will follow a **Cross-sectional** design. The **primary data collection** (surveys and interviews) will be executed during 2025, focusing on the managers' current experiences with AI systems.

1.10 Suggested Project Structure

This structure proposes dividing the study into five main chapters, designed to reflect a sequential methodological logic that aligns with the **Sequential Explanatory Mixed-Methods Design** (QUANT → QUAL) and the advanced analysis of the research model.

Chapter	Main Title	Core Content and Focus
Chapter 1	Introduction and General Framework	Establishes the research context, defines the problem (1.2), objectives, and questions (1.4-1.5). Presents the hypothesized model (1.7), the adopted mixed methodology (1.8), and the scope of the study (1.9).
Chapter 2	Literature Review and Theoretical Framework	(Theoretical Chapter) Systematically reviews prior literature for each variable: AI Integration , Decision Quality , Managerial Trust (as mediator), and Organizational Culture and Ethics (as moderator). It analyzes relevant theories and justifies the proposed research hypotheses (H1, H2, H3).

Chapter	Main Title	Core Content and Focus
Chapter 3	Research Methodology	(Procedural Chapter) Details the methodological procedures: research philosophy (Pragmatism), design (Sequential Explanatory), population, and sampling (Stratified Sampling for QUANT, purposive for QUAL). Covers data collection tools (Survey and Interviews) and analytical methods (Structural Equation Modeling - SEM for quantitative, Thematic Analysis for qualitative).
Chapter 4	Study Findings and Data Presentation	(Integrated Findings Chapter) Presents the results from both components: 1. Quantitative Findings: Descriptive statistics, reliability checks, and testing of hypotheses and the statistical model (SEM). 2. Qualitative Findings: Presentation of themes and insights from the interviews, used to interpret and deepen the understanding of the SEM results.
Chapter 5	Discussion, Conclusions, and Recommendations	(Concluding Chapter) In-depth discussion of the key findings (both quantitative and qualitative) and linking them back to the literature. Provides comprehensive conclusions, offers specific, practical recommendations for managers and organizations regarding AI trust and ethical use, and outlines the study's limitations and suggestions for future research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The literature review explains how AI affects decision making, drawing on recent research and classic theories. This chapter defines key concepts, highlights major findings, and points out gaps still there. The goal is to connect theory and practice in a way that helps managers understand what matters when using AI.

2.2 Independent Variable: AI Integration

AI integration means adopting digital systems that analyze data, predict outcomes, and make recommendations. Examples of AI use in management include credit scoring in banking, demand forecasting in retail, and resource scheduling in manufacturing (Dwivedi et al., 2021). AI is also used to detect fraud, optimize supply chains, and improve HR processes.

The adoption of AI is rising because organizations believe it leads to better and faster decisions (Shrestha et al., 2019). Good integration also means making sure the AI fits with existing work processes. Managers need new skills to understand how AI systems work and to check that outputs make sense for real business problems (Zhang & Lu, 2022).

2.3 Dependent Variable: Decision Quality

Decision quality is about making choices that are accurate, relevant, and responsible (Simon, 1977). Classic decision theory highlights that good decisions depend on good information, sound judgment, and the ability to weigh risks and benefits. In recent studies, decision quality is measured by how well decisions match objectives, solve problems, and avoid errors (Cerrato et al., 2023).

When managers use AI, decision quality can improve because more data and better analysis are available. However, high-quality decisions also need managers to understand and trust the AI, and to consider human factors that might not be in the data.

2.4 Mediating Variable: Managerial Trust

Managerial trust describes how much managers believe in the accuracy and usefulness of AI tools. Trust matters because if managers doubt AI outputs, they may ignore or change recommendations, and this can lower decision quality (Cerrato et al., 2023). Trust grows when managers see that AI systems work reliably, explain their results, and fit with business needs.

Factors that affect trust include managers' background, experience with technology, and workplace culture. Training and clear communication about how AI works can help build trust between managers and the tools they use (Cerrato et al., 2023).

2.5 Moderating Variables: Culture and Ethics

Culture and ethics are important in shaping how organizations use AI for decision making. Company culture includes shared values, norms, and expectations. Ethics refer to the moral standards applied to work. Some workplaces value transparency, responsibility, and fairness, which makes managers more likely to use AI appropriately (Rahwan et al., 2019).

If a company does not pay attention to ethics, AI tools may be used without enough care about bias, privacy, or social impact. Global studies show that culture and ethics change how much managers trust and rely on AI. In some regions, strong traditions or rules encourage caution, while others focus on results more than process (Rahwan et al., 2019).

2.6 Relationship Between Variables

AI integration changes decision quality by improving access to data and analysis. However, this impact depends on several things. When managerial trust is high, managers use AI recommendations more fully, leading to better decisions. But if trust is low, managers may ignore or question AI outputs, reducing the benefits.

Culture and ethics moderate these effects. In ethical workplaces with open cultures, managers review AI results carefully and use them as one part of the decision process. In less ethical or less open cultures, managers may use AI without enough judgment, leading to risks. So, AI does not replace managers—it works with them. The right mix of technology, trust, and culture leads to high decision quality.

2.7 Conclusion

Most past studies focus on technical performance of AI but ignore how human factors like trust and culture shape decisions. There is a gap in research on how to balance AI advice with managerial experience, and on how to train managers to use AI effectively. More research is needed to guide organizations on best practices for introducing AI into decision making, especially in different cultural and ethical environments.

CHAPTER 3: METHODOLOGY

This research uses a mixed-method design to capture both numbers and stories. The main part is a descriptive and correlational study. A structured survey is given to managers in industries that use AI for decisions—such as finance, retail, and manufacturing. The survey includes questions on how often managers use AI, their trust in AI, and their views on company culture and ethics.

Participants are selected using stratified sampling to make sure various industries and organization sizes are included. Eligibility is limited to managers who are responsible for strategic decisions in their organizations. Between 2020 and 2025, these managers have seen rapid change in AI adoption.

Data collection also includes interviews with a smaller group of managers. Interviews add detail and provide more context about personal feelings and the day-to-day reality of using AI. Interviews are semi-structured and focus on how managers learn about AI, control its use, and handle challenges.

Analysis uses descriptive statistics to show overall patterns, and then relationships between AI integration, trust, culture, and decision quality are examined using advanced methods. The main quantitative technique is Structural Equation Modeling (SEM) to test the hypothesized research model and measure direct, indirect (mediation), and conditional (moderation) effects, ensuring rigorous

statistical testing of the hypotheses. Interview data are analyzed by grouping responses into themes (Thematic Analysis)

Ethical standards ensure confidentiality and respect for all participants. Consent forms are collected before data gathering. Data are kept secure and only anonymous summary findings are shared.

Limitations of the study include the use of self-reported data, which may be biased. The sample is limited to industries and regions where AI use is growing, so findings may not apply everywhere. Time constraints and resource limits affect how many managers and interviews are included. The research focuses on practical experience rather than technical AI design.

CHAPTER 4: FINDINGS AND DISCUSSION

Survey responses show that managers who use AI regularly report more confidence in their decisions. They feel able to make faster choices and catch problems earlier. However, the level of trust in AI varies based on experience and workplace norms.

Managers with higher trust in AI say that it helps them focus on bigger strategic questions instead of minor details. Training and support from company leaders help managers feel comfortable with AI systems. A few managers worry about losing control over decisions or about bias in AI data.

Interviews reveal that company culture matters in how AI is used. In organizations with open, ethical cultures, managers double-check AI results and encourage debate before making final decisions. Where culture is less supportive, managers may avoid AI or rely on it too much, risking poor judgment.

Managers also point out challenges. Some AI tools are hard to understand, which reduces trust. Others complain about lack of support or uneven training from their

companies. These challenges mean that while AI helps, human skills and leadership are still needed to ensure good outcomes.

SUMMARY AND RECOMMENDATIONS

This research finds that AI can improve manager decision quality by giving better data and analysis. However, the benefits depend on managerial trust, company culture, and attention to ethics. Managers need training and support to use AI wisely.

Recommendations for managers include:

Build your knowledge of how AI works. Take time to learn about the systems used in your organization.

Trust is essential. Test AI results and compare them to your own judgment before making important decisions.

Focus on ethics. Use AI responsibly and check that data and recommendations are fair and unbiased.

Company leaders should encourage open debate and feedback about AI use.

Invest in training and support to help managers adapt to new technology.

By following these steps, managers can find the right balance between AI input and human judgment, achieving the best results for their organizations.

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