Chapter 1

Introduction

1.1. AI in Business Decision-Making and Its Usage in MSMEs

Artificial Intelligence (AI) has become a recent potential tool in improving strategic business decisions to establish and operate an effective corporate strategy, leading to impactful changes in traditional models and further refining business agility (Kaggwa et al., 2023). This is done by using AI to enhance analytical capabilities, optimizing processes, and facilitating data-driven strategies. Several studies have shown the capabilities of AI in processing complex datasets, identifying patterns, and providing actionable insights that prove useful in improving business operations (Hidayah et al., 2023).

The usage of AI in business decision-making can be particularly useful for Micro, Small, and Medium Enterprises (MSMEs) as AI provides MSME businesses with cost-effective solutions for market analysis, developing customer engagement, and maintaining operational efficiency. One example is where AI systems are used to help managers and employees evaluate different aspects of the business, such as market conditions, competitor behavior, and internal performance metrics, to generate strategic options or recommendations to improve business operations (Csaszar et al., 2024).

Previous evaluations have shown that AI-generated strategies can now rival strategies developed by experienced entrepreneurs in terms of quality and potential for innovation. AI systems can additionally improve operational optimization in areas such as performing predictive analytics for inventory management, optimizing customer segmentation, and automating financial forecasting models, while assisting in identifying potential risks for risk management by using features such as real-time market monitoring, supply chain vulnerability assessments, and fraud detection systems (Csaszar et al., 2024).

For Indonesian MSMEs, there has been a recent growth of AI integration in their business operations despite facing infrastructural challenges. In MSMEs, AI systems can be used to strategically manage and reduce high operational costs, analyzing historical financial data to find new growth opportunities and trends in the respective markets, streamline operations, reduce expenses while improving productivity, and provide recommendations to support the informed decision-making process (Maghfirah & Eni, 2024).

Additionally, recent government-led projects in Indonesia, such as the "Making Indonesia 4.0" roadmap, are aimed at establishing AI as a driver to improve Indonesia's economic growth and technological advancement. This is done through building public-private research and development partnerships, establishing digital literacy programs to help SME owners better understand AI and learn how to use the technology, and promoting tax incentives for easier adoption of AI technology in Indonesia. However, MSMEs have to overcome challenges in implementing AI adoption in their business operations such as dealing with high costs of implementing good AI systems that relates to their specific operations, having a lack of knowledge and skills needed to effectively implement, operate, and leverage AI systems, and difficulties in gaining access to good infrastructure to support the effective implementation and utilization of AI technologies (Santoso et al., 2025).

1.2. Problem Statement

While MSMEs have been using AI for business activities such as generating new ideas and recommendations to improve their business operations and supporting customer service, there is little information or research that shows how MSMEs in DKI Jakarta, a capital of Indonesia known for being a hub for Indonesia's digital economy policies and Smart City initiatives, adopt AI specifically for business decision-making. Although there is existing research that analyzes the perceived usefulness and ease of use as key adoption drivers for using AI technologies, they often lack regional specificity, which led to a

lower understanding on how DKI Jakarta's unique business ecosystem influences the integration of AI to support the decision-making processes (Santosa & Surgawati, 2024).

1.3. Research Gaps

While several studies have examined the usage of AI in supporting businesses to make informed decision-making in business operations, there is a lack of empirical research that examines the perception of MSME owners or employees in MSME businesses on using AI for business decision-making in Jakarta's business ecosystem and whether or not MSMEs have shown acceptance or willingness in using AI to make good decisions that benefits the business. Therefore, the research study examines the perceptions of MSME workers about the benefits of using AI to make effective and informed business decisions within DKI Jakarta's MSME research landscape, which previous research studies had not yet explored (Santosa & Surgawati, 2024; Khan, 2024).

1.4. Research Questions

The research focuses on exploring the research gap by understanding the perception of MSME owners, managers, and employees on the usage of AI in business decision-making. This exploration is done by answering the following questions:

1. How do owners, managers, and employees in MSMEs perceive the benefits of adopting AI in the business decision-making process?

2. What areas of business (e.g., marketing and operations) do owners, managers, and employees in MSMEs believe are most beneficial when using AI in business decision-making?

3. What is the relationship between MSMEs' perception of AI and the intention of implementing AI in business decision-making?

1.5. Research Objectives

Based on the research questions, the research explores and assesses the perception of users utilizing AI in making good business decisions. This is done by achieving these objectives that seek to better understand how MSMEs perceive the benefits of AI in decision-making:

- To identify and assess how owners, managers, and employees from MSME companies perceive the benefits of adopting AI in making good business decisions.

- To identify the business aspects (e.g., marketing, finance, operations) where owners, managers, and employees from MSMEs consider AI to be most beneficial for business decision-making.

- To analyze the relationship between MSMEs' perception of the benefits of AI decision-making and the intention to implement AI in business decision-making.

1.6. Significance of the Study

The research study aimed to provide a better understanding of how MSMEs in DKI Jakarta perceived the idea of adopting and utilizing AI for business decision-making. While previous research showed the performance of using AI for operations and customer service, only a few studies focused on AI's role in decision-making, especially within the context of DKI Jakarta (Santosa & Surgawati, 2024; Khan, 2024).

Therefore, through examining and understanding the perception of AI in benefiting the business decision-making process, the research study provides valuable insights and practical solutions to support the development of AI integration into key activities of the business, especially in the business decision-making process, while fostering growth within the MSME sector to adapt to changing business environment.