Impact Analysis of Artificial Intelligence Implementation in Business and Management (Case Study: XYZ Company)

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Iin Sahuri Haryoto[1], Dian Andriana[1], Alexander Santoso[1] and Agung Mulyo Widodo[1]*

[1]Universitas Esa Unggul, Jakarta, Indonesia
iin@student.esaunggul.ac.id,
dianandriana@student.esaunggul.ac.id,
lextoso.slava@student.esaunggul.ac.id and
agung.mulyo@esaunggul.ac.id

Abstract

The growth of artificial intelligence (AI) technology has opened up great opportunities in various industrial sectors, including the property sector. XYZ Company as a company engaged in the property sector faces challenges in managing rapidly growing data and making the right decisions in various aspects of the business, from planning to property sales. This research aims to explore the application of AI in decision making and business process optimization at XYZ Company. Using a qualitative research method with a case study approach, data was collected through in-depth interviews, observation, and documentation. The results show that the application of AI provides significant benefits in improving decision accuracy, optimizing business processes, and increasing the company's operational efficiency. However, the company also faces challenges in terms of limited human resources who understand AI technology, high implementation costs, and employee resistance to business process changes. Nonetheless, AI proved to have great potential to improve XYZ Company's competitiveness in the property industry, and became a key factor in the company's digital transformation. This research makes an important contribution to understanding the application of AI in the property sector, while offering insights for other companies looking to utilize this technology to improve business performance.

1 Introduction

The growth of artificial intelligence (AI) technology has brought significant impacts in various industrial sectors, including the property sector. XYZ Company as a company engaged in the property

sector, faces challenges in managing the growing data and making the right decisions in every aspect of the business, from planning, project development, marketing, to property sales and leasing. Implementing AI offers the opportunity to improve efficiency and accuracy in decision-making, as well as optimize overall business processes.

AI can analyze large amounts of data with much higher speed and accuracy compared to traditional methods. One example of its application in the property sector is in property market analysis. By using machine learning algorithms, AI can analyze property price trends, market demand, and consumer preferences to provide more precise pricing recommendations and reduce the risk of bad investments (Liu, et al., 2020). In addition, AI can also be used to optimize other business processes such as inventory management, risk management, and customer needs prediction (Kuo & Hsu, 2020).

In the area of decision-making, AI can leverage historical data and consumer behavior patterns to provide deeper insights into strategic decisions. For example, the use of AI in a recommendation system for matching properties with user preferences or in investment risk analysis can improve the accuracy of decisions made by the management of XYZ Company. In this case, AI serves as a tool that accelerates the decision-making process and enables the identification of opportunities and challenges that were previously difficult to predict.

In addition, AI can also be used to improve the optimization of company operations. Through business process automation, such as in transaction data processing or property maintenance management, AI can reduce manual workload, minimize errors, and increase employee productivity. This automation, combined with AI's ability to analyze real-time data, allows XYZ Company to respond to market dynamics more quickly and precisely.

Along with the many potentials that can be utilized, the implementation of AI in decision-making and business process optimization in the property sector still faces various challenges, especially related to data quality, technology implementation costs, and human resource adaptation to this technological change (Chien & Chen, 2020). However, the great potential offered by AI makes this technology one of the key drivers in creating competitive advantage for property companies in the future.

2 Research Methods

This study uses a qualitative research method with a case study approach to explore the application of artificial intelligence (AI) in the property sector, especially at XYZ Company. Qualitative research aims to dig deeper into the phenomenon being studied in a descriptive and interpretive manner. This approach prioritizes the analysis of qualitative data, which allows researchers to understand the context, experiences, and views of participants, not just numerical or statistical results.

Qualitative research is an approach used to gain a deeper understanding of a phenomenon, social phenomenon, or a particular problem that cannot be explained by numbers or statistics. The main purpose of this research is to explore and understand events, experiences, and individual views in a broader context. In this research, researchers prioritize narrative data analysis, obtained through interviews, observations, and documentation studies.

Qualitative research methods are well suited for exploratory studies, where researchers seek to understand the perceptions, values, and actions taken by individuals or groups in dealing with a phenomenon, in this case the application of AI at XYZ Company. The main advantage of a qualitative approach is its ability to explore context in depth and provide a more comprehensive understanding of the problem being studied.

2.1 Qualitative Research Using Case Studies

A case study is an approach in qualitative research that investigates one or more cases in depth and detail in their real-life context. Case studies allow researchers to gain a more holistic understanding of the phenomenon under study, and in this case, the application of AI in decision-making and business process optimization at XYZ Company. In this research, a case study is used to investigate how AI is implemented in a specific company's operational context, as well as the challenges and successes faced.

The case study method provides an opportunity to examine phenomena in a natural, uncontaminated environment, allowing for a more in-depth analysis of how AI is applied in everyday business practices. Researchers can identify factors that influence AI adoption, as well as gain relevant insights that can be used by other companies implementing similar technologies.

2.2 Implementation of Qualitative Research with Case Studies

This study uses various data collection methods to explore the application of AI at XYZ Company, including:

a. One-on-One Interviews

These interviews are conducted with parties who have direct knowledge of the implementation of AI at XYZ Company, such as IT managers, heads of related departments, and company executives. Through one-on-one interviews, researchers can gain a deeper understanding of the challenges, benefits, and experiences of implementing AI in business and operational decisions.

b. Focus Groups

Focus group discussions are conducted involving several employees who work with AI at XYZ Company. The purpose of the focus group is to gain a broader perspective on the implementation of AI, as well as to bring up ideas or issues that may not have emerged in individual interviews. Focus groups also provide an opportunity to explore further the interactions between team members in overcoming challenges faced in implementing the technology.

c. Ethnographic Research

Researchers will directly observe the work processes and organizational culture at XYZ Company, especially those related to the use of AI in decision-making and operational processes. Ethnographic research provides insight into the social and organizational contexts that influence the implementation of AI, as well as how employees interact with the technology in their daily lives at work.

d. Case Study Research

Case study research allows researchers to investigate more deeply into the implementation of AI in XYZ Company comprehensively. Data is collected through various sources such as interviews, observations, and internal company documentation. Researchers will analyze how AI is implemented in the context of the company's operations and strategies, and identify the results achieved and challenges faced.

e. Recording

Recording is carried out during all data collection activities, including interviews, focus groups, and observations. All relevant findings are recorded to ensure that the data obtained is detailed and systematic. Accurate recording is also important to facilitate researchers in conducting in-depth data analysis.

f. Observation

Researchers will conduct direct observations of activities involving the use of AI in XYZ Company. This observation aims to understand in real terms how AI technology is applied in the company's daily operational activities, as well as to obtain a clearer picture of the challenges faced in its implementation.

Data collected through interviews, focus groups, ethnographic research, and observations will be analyzed using thematic analysis techniques. In this analysis, researchers will identify key themes that emerge from the data, explore relationships between these themes, and analyze patterns that exist in the context of AI implementation at XYZ Company. By using a qualitative approach and case study, this research is expected to provide in-depth insights into how AI is applied at XYZ Company, as well as the challenges and successes faced in implementing this technology to improve decision-making and business processes, below is an overview of qualitative research methods.

Figure 1: Qualitative Methods

3 Results and Discussion

XYZ Company as an innovative property company, leverages AI to transform decision making and daily business operations. AI helps predict property trends and identify profitable investment opportunities. In addition, AI is also leveraged to improve operational efficiency through automation of routine tasks and smarter property management. By implementing AI, companies gain significant added value to improve competitiveness and achieve sustainable business growth.

3.1 AI for Decision Making

AI can analyze property market data in real-time, predict price trends, and identify potential locations for new project development. AI also helps in evaluating investment risks by processing historical data and external factors such as economic conditions and government regulations. Thus, utilizing AI not only speeds up the decision making process but also improves the quality of decisions made, giving company a competitive edge in the increasingly dynamic property industry.

3.2 Business Process Optimization

AI has brought about a significant transformation in administrative processes by automating tasks that were previously time-consuming and prone to human error. In terms of document management, AI is able to recognize and classify different types of property documents, allowing companies to store and access important information more efficiently. In addition, AI can also assist in project

scheduling, optimizing resource allocation, and predicting potential risks. Thus, building managers can make more timely and effective decisions. AI also plays a role in property inventory management, as it can monitor unit availability, manage tenant data, and even provide pricing recommendations based on market trends.

3.3 Challenges Faced

Limited human resources who understand AI technology, high implementation costs, and employee resistance to business process changes are the main challenges in implementing AI. Switching from conventional methods to AI based systems often raises fears of role loss or inability to adapt to new technologies. This can create psychological and cultural barriers that need to be overcome through effective communication approaches, continuous training, and an emphasis on the long-term benefits of AI in improving efficiency and competitiveness.

3.4 Implementation Results

The implementation of AI at XYZ Company shows that this technology can be an effective tool to improve business performance. However, the success of AI implementation depends not only on the technology itself, but also on the company's readiness for change. The company needs to ensure that its staff have the necessary skills. In addition, it is important to consider the ethical aspects of using AI, such as data privacy. Company must ensure that the AI system used is unbiased and accountable.

4 Conclusion

Based on the research conducted at XYZ Company, it is concluded that AI provides significant benefits for property companies, especially in terms of better decision making, business process optimization, and efficiency improvement. However, companies need to prepare themselves well to face the challenges that may occur. Seeing the potential of AI that is growing quite rapidly in everything, especially in the property industry, AI deserves to be explored further considering the benefits obtained in the long run making AI a very valuable tool in the digital transformation of the property industry.

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