

DOI: <https://doi.org/10.31933/dijdbm.v5i4>

Received: 08 June 2024, Revised: 14 June 2024, Publish: 22 June 2024

<https://creativecommons.org/licenses/by/4.0/>

Analysis Of The Influence Of Artificial Intelligence On Business Innovation (Literature Review Study)

Jodi Setiawan¹, Yayan Hendayana²

¹Master of Management Students, Faculty of Economics and Business, Bhayangkara Jakarta Raya University, Jakarta, Indonesia, Email: Jodisetiawan9@gmail.com

²Lecturer the Faculty of Economics and Business, Bhayangkara Jakarta Raya University, Jakarta, Indonesia, Email: yayan.hendayana@dsn.ubharajaya.ac.id

Corresponding Author: Jodisetiawan9@gmail.com¹

Abstract: Technology plays a very important role in a business, one of which is Artificial Intelligence (AI). This research was conducted to determine the impact of AI on business innovation and the challenges faced in its implementation. This research is carried out using the Literature Review method. Data in this research is collected through various electronic media. The findings in this study are AI can automate routine tasks, increase accuracy and efficiency, and provide in-depth data analysis. Although AI replaces many human analytical skills, the need for intuitive and empathetic abilities is increasing. This shows the importance of a new approach in human-machine interaction, where AI and human skills work synergistically to provide optimal service. But in its implementation, AI has obstacles such as costs, privacy, quality of human resources, and legal regulations. Overall it can be underlined that Artificial Intelligence (AI) affects the business of business.

Keyword: Artificial Intelligence (AI), Business Innovation

INTRODUCTION

In an increasingly rapid era of digital transformation, Artificial Intelligence (AI) technology has become one of the main drivers of innovation in various industrial sectors. AI includes various technologies such as Machine Learning, Natural Language Processing (NLP), and Computer Vision, which allows computers to perform tasks that previously needed human intelligence. This significant development of AI has opened up various new opportunities for companies to develop innovative products, services, and business models. In the business context, innovation is a key factor that determines the success and competitiveness of the company. Innovation can be in the form of the development of new products, increasing operational efficiency, or the application of new business models that are more effective (Pakpahan, 2021). AI has great potential to speed up this innovation process through routine task automation, faster and more accurate data analysis, and the ability to identify trends and patterns that are not visible to humans.

Many leading companies such as Google, Amazon, and Tesla have shown how AI can be used to create a competitive advantage. Google uses AI to increase the search algorithm and personalization services, while Amazon uses AI in supply chain management and product recommendations. Tesla, on the other hand, has integrated AI into the development of a revolutionary autonomous car. However, despite AI's potential to encourage enormous innovation, its application also faces various challenges. Technical barriers such as the need for strong computing infrastructure and the complexity of the algorithm, regulatory problems and ethics related to data and security of data, as well as the need for skilled labor in the AI field are some of the main challenges that need to be overcome (Cockburn et al., 2018).

This study aims to analyze the effect of AI on business innovation through a literature review. By reviewing various existing studies and case studies, it is expected to obtain a more comprehensive understanding of how AI contributes to innovation, as well as the challenges and opportunities faced in implementing AI. The results of this review are expected to provide insight for business practitioners, academics, and policymakers in optimizing AI potential to encourage innovation and economic growth. Overall this article will explore related to 1. What is the impact of AI on business innovation? 2. What is the challenge faced in its implementation?

Through this discussion, it is expected to provide a more comprehensive understanding of how AI can be the main driver of innovation in business in the future.

METHOD

This research is included in quantitative research using the literature review method. The data in this research was collected through various electronic media. Includes the latest and quoted ebooks and journals from various sources such as Google Scholar, Science Direct, Researchgate, Googlebook, and so on.

RESULTS AND DISCUSSION

Business Innovation

"Innovation can be interpreted as a discovery that is different from what already exists or that has been known before" (Hendayana, Ahman, et al., 2019) which means a new invention, different from the previous one. Innovation is the process of finding or applying something new through the process of creativity to new situations. Novelty shows the difference from others. Novelty is relative, meaning that it is considered new by others or in a context is something ancient for others or in other contexts (Hendayana, Suryana, et al., 2019). Whereas business is explained as a business is an activity or business carried out by individuals, groups, or organizations to generate profits through production, sales, or supply of goods and services to consumers. Business includes a variety of activities, ranging from the production of goods, provision of services, and trade, to investment. So, business innovation is the process of creating or applying new ideas that are different from what already exists to improve or develop business activities carried out by individuals, groups, or organizations. This innovation aims to generate greater profits through the production, sales, or supply of goods and services to consumers. Business innovation not only includes the discovery of new technology, but also includes changes in marketing strategies, human resource management, supply chains, and overall business models (Sacha et al., 2024).

From some of the definitions above, it can be synthesized that business innovation is to find new products, tools, or services that can provide value in the form of benefits both financially or other forms of profit.

Artificial Intelligence (AI)

According to (Huang & Rust, 2022) Artificial Intelligence is a machine that imitates digital human intelligence and is designed to imitate and exceed the abilities and permanent

nature of the human being itself. The intended trait is to work on tasks, mechanisms, and processes of thought. This definition was later developed by Longoni, (Longoni et al., 2019) Defines Ai as *"any machine that uses any kind of algorithm or statistical models to perform perceptual, cognitive, and conversational functions typical of the human mind."* The point is that AI is used as a machine in any form that uses any algorithm or statistical model to carry out cognitive functions and conversations that are typical in human thought. Thus, artificial intelligence (AI) can be explained as an artificial intelligence that imitates humans but is designed to exceed human abilities, the intended ability is like the nature and way of thinking concerning the emotional nature of doing tasks.

Another definition related to Artificial Intelligence (AI) is explained by (Wang & Larsson, 2020) *"AI is the simulation of human intelligence operations by computers, particularly computer systems"* According to him AI is artificial intelligence that imitates or imitates the workings of human intelligence. This means that computers are designed and programmed to carry out tasks that usually require human intelligence, such as understanding language, introduction of patterns, decision making, and problem-solving. In this context, the computer system used for AI can include software and hardware specifically designed to support these tasks. AI is very effective in carrying out certain tasks (Limna, 2023).

From some of the definitions above, it can be synthesized that artificial intelligence is a machine that mimics human intelligence by using any algorithm or statistical model to carry out cognitive functions and typical conversations in human thought and overall AI is very effective in carrying out certain tasks.

Relationship of Artificial Intelligence and Business Innovation

Artificial Intelligence (AI) has a close relationship with business innovation because AI can encourage various forms of change and improvement in the way of business operations. AI can automate routine and repeated tasks, allowing employees to focus on more creative and strategic jobs (Nikmah et al., 2023). This includes automation in data processing, customer service, production, and more. AI can analyze large amounts of data quickly and accurately, and identify patterns and trends that may not be seen by humans. This helps businesses make more informational and timely decisions (Wijaya & Simamora, 2022). By using AI, companies can provide more personal services to customers. For example, product recommendations that are tailored to individual preferences or personalized user experience on websites and applications. AI can help in the research and development of new products by analyzing market needs, identifying gaps in current offers, and proposing new innovative features or products (Maisharoh & Ali, 2020).

AI can increase operational efficiency by optimizing supply chains, managing inventory better, and reducing operational costs through better demand predictions and scheduling (Zulham et al., 2023). AI algorithms can process information and provide recommendations or decisions quickly, which help management take action that is faster and more accurate. AI can detect suspicious activities and prevent fraud by identifying anomalies in transactions or network activities. Chatbot AI and Virtual Assistant can also provide 24/7 customer service, answer questions, and solve problems quickly and efficiently. Overall, AI encourages business innovation by creating opportunities for greater efficiency, better services, and more innovative products, all of which can provide a competitive advantage and improve business performance.

According to (Akmaluddin & Dewayanto, 2023) at this time, Artificial Intelligence has also assisted in developing a smarter decision-making system. By analyzing the latest historical data and data, the artificial intelligence system can provide better recommendations in terms of allocation of resources, budget planning, and overall business strategies. This helps managers make more directed decisions and potentially reduces the risk of error in planning and implementation.

Research conducted by (Diyah et al., 2022) found that artificial intelligence (AI) gradually replaces human analytical skills, but the need for intuitive abilities and empathy skills for professionals in the service field is increasing, therefore a new approach to Human-machine interaction is still needed to provide excellent service. This means that artificial intelligence (AI) is changing the dynamics of skills needed in various fields, especially in the service industry even though AI can take over many analytical tasks, the professional role that involves human interaction still requires intuitive and empathetic abilities that can only be given by humans

Whereas in research conducted by (Juniardi, 2024) revealed that AI has a significant impact on accounting practices and potential future innovations and effective solutions. This means that AI not only improves current accounting practices by making them more efficient and accurate but also opens the way for future innovations that can bring new and more effective solutions in the field of accounting.

From some of the statements above, it can be concluded that AI encourages business innovation by creating opportunities for greater efficiency, better services, and more innovative products, all of which can provide a competitive advantage and improve business performance.

Barriers to AI Implementation in Business Innovation

Although AI has a significant impact on business innovation, it is inevitable that in the implementation of AI in a business, a business must have obstacles, such as swollen operational costs (Desvira, 2021). In the context of business that has developed the problem of costs is no longer an obstacle. However, in the context of a new or secondary business, it will certainly experience cost swelling as in the provision of technological infrastructure. Not to mention the cost of training and employee development, because basically no matter how good the technology adopted without the presence of human beings the results will certainly not be as expected (Surya & Yamazaki, 2014).

Security issues are inevitable, if we talk about AI and technology, it is inseparable from cyber attack and security vulnerability can be a big threat. This is related to data privacy. For this reason, each country has its regulations and regulations limiting AI. In Indonesia, several regulations related to AI have been stated including 1. Law Number 11 of 2008 concerning Information and Electronic Transactions (ITE Law): This Law regulates legal aspects related to electronic transactions, including the use of AI. 2. Law Number 27 of 2022 concerning Protection of Personal Data (PDP Law): This Law protects personal data and can apply to the use of AI involving personal data. 3. Government Regulation Number 71 of 2019 concerning Implementation of Electronic Systems and Transactions (PP PSE): This PP regulates the implementation of electronic systems and transactions, which include the use of AI. 4. Regulation of the Minister of Communication and Information Number 5 of 2020 concerning Organizers of the Electronic System of Private (Permen PSE) AI Implementation in Business Innovation offers a lot of potential, but also faces various obstacles that need to be overcome.

CONCLUSION

Based on the previous discussion, it can be concluded that AI can automate routine tasks, increase accuracy and efficiency, and provide in-depth data analysis. This drives innovation in various aspects of the business, including new product development, personalization of services, and increased operational efficiency. Although AI is replacing many human analytical skills, the need for intuitive abilities and empathy is increasing. This shows the importance of a new approach to human-machine interaction, where AI and human skills work synergistically to provide optimal service.

However, in implementing AI there are obstacles such as cost, privacy, quality of human resources, and legal regulations. To overcome these obstacles, companies need to

develop thoughtful strategies that include investing in technology and training, addressing privacy and security issues, and ensuring regulatory compliance. Additionally, it is important to build an organizational culture that is ready to embrace change and leverage synergies between AI and human skills.

Overall, AI offers great opportunities for business innovation, but its implementation requires attention to various obstacles and challenges. Companies that can overcome these obstacles will be able to harness the full potential of AI to improve their performance and competitiveness.

REFERENSI

- Akmaluddin, M., & Dewayanto, T. (2023). Systematic Literature Review: Implementasi Artificial Intelligence Dan Machine Learning Pada Bidang Akuntansi Manajemen. *Diponegoro Journal Of Accounting*, 12(4), 1–11. <http://Ejournal-S1.Undip.Ac.Id/Ind-ex.Php/Accounting>
- Cockburn, Henderson, & Sterm. (2018). The Impact Of Artificial Intelligence On Innovation.
- Desvira, S. G. B. (2021). Pengaruh Pemanfaatan Teknologi, Partisipasi Pemakai, Kemampuan Teknik Pemakai, Pengalaman Kerja Dan Jabatan Terhadap Efektivitas Sistem Informasi Akuntansi. *Jurnal Kharisma*, 3(1), 11–21. <https://E-Journal.Unmas.Ac.Id/Index.Php/Kharisma/Article/View/1666>
- Diyah, I., Indrawaty, M., & Mar'atus, S. (2022). Job Replacement Artificial Intelligence Di Industri Jasa: Tinjauan Pustaka Sistematis. *Jurnal Ilmu Manajemen*, 10(3), 911–929.
- Hendayana, Y., Ahman, E., & Mulyadi, H. (2019). The Effect Of Innovation On Business Competitiveness Of Small And Medium Enterprise In Indonesia.
- Hendayana, Y., Suryana, Ahman, E., & Mulyadi, H. (2019). Do Technological Capabilities Influence Innovation In Creative Industry: The Case Of Handicraft Sector In Indonesia. *International Journal Of Scientific & Technology Research*, 8(08), 1722–1725. <https://doi.org/10.1177/104225879702200103>
- Huang, M. H., & Rust, R. T. (2022). A Framework For Collaborative Artificial Intelligence In Marketing. *Journal Of Retailing*, 98(2), 209–223. <https://doi.org/10.1016/J.-Jretai.2021.03.001>
- Juniardi, E. (2024). Peran Dan Praktik Artificial Intelligence Akuntansi: Systematic Literature Review. *Jurnal Revenue*, 4(2), 885–898. <https://doi.org/10.4-6306-/Rev.V4i2>
- Limna, P. (2023). Artificial Intelligence (Ai) In The Hospitality Industry: A Review Article. *International Journal Of Computing Sciences Research*, 7, 1306–1317. <https://doi.org/10.25147/Ijcsr.2017.001.1.103>
- Longoni, C., Bonezzi, A., & Morewedge, C. K. (2019). Resistance To Medical Artificial Intelligence. *Journal Of Consumer Research*, 46(4), 629–650. <https://doi.org/10.1093/Jcr/Ucz013>
- Maisharoh, T., & Ali, H. (2020). Faktor-Faktor Yang Mempengaruhi Infrastruktur Teknologi Informasi: Keuangan, Fleksibilitas Ti, Dan Kinerja Organisasi.
- Nikmah, W., Mukarromah, A., Widyansyah, D., Anshori, I., Manajemen, P., Ekonomi, F., & Bisnis, D. (2023). Penggunaan Teknologi Dalam Pengembangan Sdm. *Jurnal Penelitian Dan Karya Ilmiah*, 1(5). <https://doi.org/10.59059/Mutiara.V1i4.511>
- Pakpahan, R. (2021). Analisa Pengaruh Implementasi Artificial Intelligence Dalam Kehidupan Manusia. *Journal Of Information System, Informatics And Computing Issue Period*, 5(2), 506–513. <https://doi.org/10.52362/Jisicom.V5i2.616>
- Sacha, S., Gamaliel, A., & Tangkudung, D. (2024). Hubungan Kinerja Tim Dan Inovasi Bisnis: Sebuah Tinjauan Literatur. In *Jurnal Multidisiplin Inovatif* (Vol. 8, Issue 4).

- Surya, B. A., & Yamazaki, K. (2014). Optimal Capital Structure With Scale Effects Under Spectrally Negative Lévy Models. *International Journal Of Theoretical And Applied Finance*, 17(2). <https://doi.org/10.1142/S0219024914500137>
- Wang, & Larsson. (2020). Artificial Intelligence Enabled Wireless Networking For 5g And Beyond: Recent Advances And Future Challenges. *Ieee Wireless Communications*, 27(1), 16–23.
- Wijaya, L. D., & Simamora, V. (2022). Pengaruh Kapabilitas Teknologi Informasi Dan Kapabilitas Inovasi Terhadap Strategi Dan Dampaknya Terhadap Keunggulan Bersaing Umkm Kuliner. In *Jurnal Ilmiah Akuntansi Dan Bisnis* (Vol. 7, Issue 1). <http://journal.undiknas.ac.id/index.php/Akuntansi>
- Zulham, Lubis, Z., Zarlis, M., Reza Aulia, M., & Tanjung, Y. W. (2023). Strategi Optimalisasi Adopsi Teknologi Sistem Barcode Di Pt. Langkat Nusantara Kepong. *Technomedia Journal*, 8(1 Juni), 23–34. <https://doi.org/10.33050/Tmj.V8i1.1935>