



Department of Digital Business

Journal of Artificial Intelligence and Digital Business (RIGGS)

Homepage: <https://journal.ilmudata.co.id/index.php/RIGGS>

Vol. 4 No. 4 (2025) pp: 313-319

P-ISSN: 2963-9298, e-ISSN: 2963-914X

SWOT Analysis of Artificial Intelligence Implementation in Digital Business Models in Indonesia

Ade Suhara¹, Supriandi², Yana Priyana³

¹Universitas Buana Perjuangan Karawang, Indonesia

^{2,3}Nusa Putra University, Indonesia

ade.suhara@ubpkarawang.ac.id, supriandi@nusaputra.ac.id, yana.priyana_MN25@nusaputra.ac.id

Abstract

This study investigates the implementation of Artificial Intelligence (AI) in digital business models in Indonesia through a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analytical framework. Using a qualitative research approach, data were obtained from five key informants representing digital business practitioners, technology consultants, policymakers, and academics. The findings indicate that AI enhances operational efficiency, supports personalized customer experiences, and facilitates data-driven decision-making, which collectively strengthen innovation, agility, and competitiveness. Despite these advantages, the study identifies several persistent barriers, including high implementation costs, limited AI-skilled human resources, and challenges related to data quality and cybersecurity. Opportunities are supported by government-led digital transformation programs, such as Making Indonesia 4.0 and the National AI Strategy 2045, the rapid expansion of the digital economy, and continuous advancements in cloud computing and big data analytics. Nevertheless, significant threats remain, such as regulatory uncertainty, ethical concerns over data governance and algorithmic bias, and dependence on foreign technology providers. The study concludes that successful AI integration in Indonesia's digital business ecosystem requires a strategic balance between technological investment, workforce capability development, and adaptive regulatory frameworks. By strengthening cross-sector collaboration and ensuring ethical, inclusive governance, AI can serve as a key driver of sustainable innovation and long-term competitiveness in Indonesia's digital economy.

Keywords: Artificial Intelligence, Digital Business Models, Swot Analysis, Indonesia, Qualitative Research

1. Introduction

The rapid advancement of digital technologies has profoundly transformed global business models, including in Indonesia. Among these, Artificial Intelligence (AI) stands out as a major driver of innovation, efficiency, and competitiveness in the digital economy. AI enables automation, data analysis, consumer behavior prediction, and personalized services, leading companies in e-commerce, fintech, logistics, and digital marketing to integrate AI into their operations to enhance growth and customer satisfaction. In digital marketing, AI has improved effectiveness, increasing customer engagement and conversion rates while strengthening competitive positioning [1], [2]. In e-commerce, AI drives personalization, operational efficiency, and superior customer experiences, creating new business models and competitive advantages for platforms like Amazon and Shopee [3], [4]. In fintech and logistics, AI enhances efficiency and decision-making while reducing costs, though challenges like high investment and system integration persist [5], [6]. Despite these benefits, AI adoption brings ethical and regulatory challenges such as algorithmic bias and workforce implications, requiring responsible governance and collaboration among stakeholders [3], [7].

In Indonesia, the digital economy is experiencing rapid growth, supported by a young, tech-savvy population and strong government initiatives such as Indonesia Digital Vision 2045 and the Making Indonesia 4.0 roadmap, which promote the adoption of advanced technologies like Artificial Intelligence (AI) to enhance national competitiveness. Despite this potential, the integration of AI into Indonesia's digital business ecosystem faces significant challenges, including limited technical expertise, high implementation costs, inadequate infrastructure, and regulatory uncertainty. AI offers substantial opportunities in improving operational efficiency through automation and process optimization, enhancing customer experience via personalization and predictive analytics, fostering innovation through the development of new products and services, and strengthening competitive

advantage for businesses that adopt it effectively [6], [8]. However, barriers persist, such as the high financial burden of implementation, concerns over data security and privacy [1], [6], the shortage of skilled AI professionals [1], [6], infrastructure limitations that hinder scalability (Ashari et al., 2024; Suraji & Ali, 2024), and ambiguities in regulatory frameworks that discourage investment [3]. Addressing these challenges through strategic policy, capacity building, and sustainable investment is crucial to ensure that AI integration contributes effectively to Indonesia's long-term digital transformation goals.

Conducting a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis provides a structured framework to examine the internal and external factors influencing AI implementation in digital business models. The strengths reflect internal advantages such as enhanced efficiency and innovation capability, while weaknesses reveal limitations like skill gaps and resource constraints. Opportunities encompass external trends that open new avenues for business growth, whereas threats point to challenges such as competition, regulatory uncertainty, and ethical dilemmas that could impede successful implementation. This analytical approach enables a comprehensive understanding of how AI reshapes business strategies and performance within Indonesia's evolving digital ecosystem [10].

This research adopts a qualitative approach to explore these dimensions through the perspectives of five key informants, comprising business practitioners, technology experts, and academics. The qualitative design allows for an in-depth exploration of how AI is understood, applied, and adapted across diverse organizational contexts in Indonesia. The study aims to (1) identify and analyze the strengths and weaknesses of AI adoption in existing digital business models, (2) explore opportunities that AI offers for innovation and competitive advantage, and (3) examine threats emerging from technological, ethical, and regulatory domains. The findings are expected to contribute to both academic and managerial discourse by presenting a holistic understanding of AI's strategic implications in Indonesia's digital business environment.

Artificial Intelligence in Digital Business

Artificial Intelligence (AI) plays a pivotal role in the digital transformation of businesses by enhancing operational efficiency, customer engagement, and innovation. In Indonesia, AI applications are increasingly prominent in sectors such as e-commerce, fintech, and logistics, where they drive automation and personalized customer experiences, although uneven adoption due to technological and workforce disparities remains a challenge. Strategically, AI enables organizations to automate processes, optimize decision-making, and enhance customer experiences, thereby providing a competitive edge in the digital marketplace [11], [12]. In the Indonesian context, AI is widely applied in e-commerce for personalized recommendations and in fintech for fraud detection and credit scoring, underscoring its strategic value [13]. Operationally, AI improves efficiency through automation and predictive analytics, particularly in manufacturing and finance sectors, while simultaneously fostering innovation by enabling the creation of new, customer-oriented products and services that strengthen market competitiveness [13], [14]. Nonetheless, several barriers persist, including data quality issues, ethical concerns, and the urgent need for workforce upskilling [11], [14]. In Indonesia, disparities in technological readiness and data infrastructure further complicate AI integration across industries [12]. To ensure successful adoption, companies must establish clear strategic objectives, invest in high-quality data, adopt ethical governance frameworks, and emphasize change management alongside continuous employee skill development to effectively adapt to AI-driven transformations [14], [15].

Digital Business Models

The integration of Artificial Intelligence (AI) into digital business models is pivotal for enhancing agility, scalability, and customer-centricity, all of which are crucial for achieving digital transformation. AI facilitates real-time data processing and automated responses, allowing businesses to adapt swiftly to dynamic market conditions. In Indonesia, the rapidly expanding digital economy—projected to exceed USD 130 billion by 2025—highlights the urgency for enterprises to adopt AI-driven models such as platform-based ecosystems and data-driven marketplaces. These models utilize AI to enhance decision accuracy, streamline operations, and redefine value creation and delivery in the digital era. Strategically, AI serves as a catalyst for digital transformation by reshaping business strategies and operational frameworks, boosting competitiveness through automation and intelligent decision-making [11], while enabling predictive and customer-centric strategies that transcend traditional linear processes [16]. In practical applications, AI has been extensively adopted across supply chain management, production, marketing, and customer service, resulting in significant efficiency gains and cost reductions [6]. Furthermore, AI-driven business models enhance scalability and agility by transforming static structures into adaptive, data-driven systems [17]. Nonetheless, several challenges hinder seamless AI integration, including ethical and legal concerns, data governance complexities, and the pressing need for workforce upskilling [11], as well as high initial investment and compatibility issues with existing infrastructures [6].

SWOT Analysis Framework

The SWOT analysis is a strategic planning tool used to evaluate internal and external factors that influence an organization's success. As defined by Gurel and Tat (2017), SWOT identifies Strengths (internal attributes that support success), Weaknesses (internal limitations that hinder progress), Opportunities (external conditions that facilitate growth), and Threats (external challenges that pose risks). In the context of AI implementation, SWOT analysis enables organizations to assess how to leverage technological capabilities while addressing potential barriers. Strengths may include improved efficiency and innovation, whereas weaknesses can involve skill shortages or high implementation costs. Opportunities emerge from expanding digital markets or supportive government initiatives, while threats often arise from data privacy issues and regulatory ambiguity. This analytical framework is particularly relevant for emerging economies like Indonesia, where digital transformation unfolds amid diverse levels of infrastructure and institutional readiness. By employing SWOT analysis, businesses can develop more effective strategies to maximize the advantages of AI while minimizing associated risks.

Previous Studies on AI Implementation

Several studies have examined the transformative role of Artificial Intelligence (AI) in business operations, highlighting its capacity to streamline processes, enhance decision-making, and improve customer engagement. AI-driven process automation has significantly optimized workflows across industries, reducing operational costs and boosting efficiency, with approximately 85% of companies integrating AI into areas such as supply chain management, production, marketing, and customer service, resulting in accelerated decision-making [6], [18]. Through cognitive insight, AI enables real-time data analysis, supporting informed decision-making and facilitating the identification of new business opportunities [19], while advanced analytics further drive strategic transformations and competitiveness [11]. In terms of cognitive engagement, AI enhances customer interactions through personalization and automation of service processes [20], and in talent management, it streamlines recruitment and customizes training to improve retention [19]. Nonetheless, high investment costs and the shortage of skilled professionals remain key barriers to AI adoption [6], [20], alongside ethical and legal concerns such as data misuse and algorithmic bias that continue to challenge its implementation [11], [20].

Theoretical Framework

This study adopts the SWOT framework as the primary theoretical lens for analyzing AI implementation in Indonesian digital business models. The framework facilitates the identification of both internal and external factors influencing AI adoption, categorized into four dimensions: Strengths, which include efficiency, accuracy, innovation capability, and competitive advantage; Weaknesses, such as high costs, limited expertise, dependence on data quality, and cybersecurity risks; Opportunities, encompassing market expansion, government support, global competitiveness, and technological advancement; and Threats, which involve ethical issues, data privacy regulations, technological obsolescence, and competitive pressure. Through qualitative inquiry, this study aims to construct a comprehensive understanding of how AI can be strategically positioned within Indonesia's dynamic digital business landscape.

Building upon this theoretical foundation, the conceptual framework of the study analyzes AI implementation through interconnected SWOT dimensions that collectively shape business strategy. Internally, strengths and weaknesses determine an organization's readiness and capacity to integrate AI effectively, while externally, opportunities and threats capture the broader digital environment shaped by policy frameworks, market dynamics, and technological evolution. This conceptualization establishes an analytical basis for exploring how Indonesian digital businesses can leverage AI to drive innovation and sustainable growth while mitigating risks associated with technological disruption.

2. Research Methods

This study employs a qualitative research design using the SWOT analysis framework to explore the internal and external factors influencing the implementation of Artificial Intelligence (AI) in digital business models in Indonesia. A qualitative approach was chosen to capture in-depth perspectives, experiences, and contextual insights from practitioners and experts directly involved in digital transformation processes. According to [21], qualitative research is appropriate for examining complex social phenomena where rich, descriptive data are required to understand underlying meanings and relationships. The research aims to identify the strengths, weaknesses, opportunities, and threats (SWOT) of AI implementation in digital business environments, providing a comprehensive understanding of the strategic and operational implications of AI adoption in Indonesian enterprises through thematic interpretation of informants' narratives.

The study adopts a descriptive qualitative approach that emphasizes understanding phenomena based on the informants' perspectives, allowing the exploration of practical realities of AI implementation beyond quantitative

indicators. Data were collected through semi-structured, in-depth interviews and analyzed using thematic and content analysis guided by the SWOT framework. The research was conducted within Indonesia's digital business ecosystem, focusing on sectors where AI plays a growing role—such as e-commerce, financial technology (fintech), logistics, and digital marketing—since these industries represent the forefront of digital transformation. Five key informants were selected through purposive sampling based on their relevance and expertise: two digital business practitioners (from e-commerce and fintech), one technology consultant, one government representative in digital economy policy, and one academic specializing in artificial intelligence and business strategy. This combination ensured a diverse range of insights, enhancing the validity and richness of the findings.

Data collection involved 60–90-minute interviews conducted face-to-face or online via video conferencing platforms, with all sessions recorded (with consent) and transcribed for analysis. The interview protocol focused on four dimensions: perceived strengths and advantages of AI, internal challenges hindering adoption, emerging opportunities from AI-driven innovation, and potential threats related to technological, ethical, and regulatory risks. In addition to interviews, secondary data from government reports, industry white papers, academic journals, and case studies were used for triangulation. Data analysis followed [22] interactive model, encompassing data reduction, data display, and conclusion drawing/verification. Through thematic analysis, patterns and dominant themes were identified across SWOT dimensions, enabling an integrated interpretation of how internal capabilities and external conditions interact to shape AI adoption strategies within Indonesia's evolving digital business landscape.

3. Results and Discussions

This presents the findings of the study derived from in-depth interviews with five informants representing practitioners, consultants, policymakers, and academics involved in the field of Artificial Intelligence (AI) and digital business in Indonesia. The data were analyzed qualitatively using the SWOT framework, which encompasses internal factors—Strengths and Weaknesses—as well as external factors—Opportunities and Threats. The results are organized thematically to provide a comprehensive overview of how AI implementation affects digital business models in the Indonesian context.

Table 1. SWOT Analysis of AI Implementation in Digital Business Models in Indonesia

Internal Factors	Description
Strengths (S)	<ol style="list-style-type: none"> 1. Enhances operational efficiency through automation of business processes. 2. Provides personalized customer experiences via AI-based recommendation systems and chatbots. 3. Enables data-driven decision-making for strategic planning and market analysis. 4. Improves accuracy and productivity, reducing human error in repetitive tasks. 5. Increases competitiveness through innovation and technological differentiation.
Weaknesses (W)	<ol style="list-style-type: none"> 1. High implementation costs for infrastructure, software, and maintenance. 2. Limited human resource competence and shortage of AI-skilled professionals. 3. Data quality issues due to fragmented or incomplete datasets. 4. Cybersecurity and privacy risks that can affect consumer trust. 5. Dependence on foreign technologies and lack of domestic AI development capacity.
External Factors	Description
Opportunities (O)	<ol style="list-style-type: none"> 1. Government support through initiatives such as Making Indonesia 4.0 and National AI Strategy 2045. 2. Growing digital economy with expanding markets in e-commerce, fintech, and digital services. 3. Advancements in cloud computing and data analytics that lower entry barriers. 4. Potential for cross-sector innovation and collaboration between businesses and research institutions. 5. Rising public and private investment in digital transformation.
Threats (T)	<ol style="list-style-type: none"> 1. Rapid technological changes causing frequent system updates and reinvestment needs. 2. Regulatory uncertainty and lack of clear AI governance frameworks. 3. Ethical concerns over data use, algorithmic bias, and accountability. 4. Global competition from multinational technology firms dominating the AI market. 5. Risk of technological dependency and limited national sovereignty in digital infrastructure.

Source: Author, 2025

Strengths of AI Implementation in Digital Business

The analysis revealed several strengths that contribute to the successful implementation of Artificial Intelligence (AI) within Indonesia's digital business landscape. One of the primary strengths is operational efficiency and automation, where all informants agreed that AI greatly enhances productivity by automating repetitive tasks such as data entry, customer service, and logistics management. In the e-commerce sector, AI-driven systems have optimized inventory control and streamlined supply chain operations, leading to cost reduction and faster delivery times. A fintech practitioner further emphasized that AI enables real-time data processing, allowing businesses to make quicker and more accurate financial decisions. This automation not only reduces human error but also minimizes operational delays, improving the overall responsiveness of digital enterprises.

Another key strength identified is enhanced customer experience, supported by AI's ability to personalize interactions through machine learning and predictive analytics. Companies can now tailor marketing strategies based on individual consumer behavior, leading to improved engagement and satisfaction. Informants noted that AI-powered chatbots and recommendation systems are indispensable in sectors like online retail and financial services, as they analyze consumer data to anticipate customer needs, boost retention, and build brand loyalty. Additionally, data-driven decision-making emerged as a crucial advantage, as AI's capacity to process large datasets enables managers to forecast trends, assess risks, and respond to market dynamics with greater precision. This fosters evidence-based management, where strategic decisions are supported by empirical data rather than intuition, ultimately strengthening organizational agility and competitiveness in Indonesia's fast-evolving digital economy.

Weaknesses of AI Implementation

Despite its advantages, several internal weaknesses hinder the optimal adoption of Artificial Intelligence (AI) in Indonesia's digital business sector. The first major challenge is high implementation costs, as all informants consistently cited financial limitations as a primary barrier. The acquisition of AI infrastructure—such as computing power, data storage, and advanced software—demands substantial investment, which is often beyond the reach of small and medium-sized enterprises (SMEs). Moreover, ongoing maintenance and system upgrades add further expenses, restricting scalability for organizations with limited resources. Another critical weakness is limited human resource competence, where the shortage of skilled professionals capable of developing, managing, and interpreting AI systems remains a significant issue. Informants from academia and consulting highlighted that, while awareness of AI is increasing, the lack of qualified experts forces many companies to rely on foreign consultants or outsourcing, which raises concerns about data security and inhibits domestic innovation. Consequently, the establishment of AI-focused education and vocational training programs is urgently needed to build a sustainable talent base in Indonesia.

A further internal constraint involves data quality and security issues, which directly affect the reliability of AI applications. Since AI systems depend on large volumes of accurate, consistent, and high-quality data, many digital businesses struggle with fragmented, incomplete, or unstandardized datasets. Informants reported that data management remains a weak point in many organizations, often due to inadequate infrastructure and poor data governance practices. Additionally, insufficient cybersecurity measures expose businesses to potential breaches and misuse of sensitive information, undermining consumer trust and regulatory compliance. These weaknesses collectively highlight that without addressing financial, human capital, and data management challenges, the long-term sustainability and scalability of AI integration in Indonesia's digital economy will remain limited.

Opportunities for AI in Digital Business

The external environment offers numerous opportunities for expanding the role of Artificial Intelligence (AI) within Indonesia's rapidly evolving digital economy. A key opportunity lies in government support and digital transformation initiatives, as strategic programs such as Making Indonesia 4.0, National AI Strategy 2045, and Digital Vision 2045 provide a strong policy foundation for AI adoption. Informants emphasized that these initiatives not only promote investment in digital infrastructure but also encourage innovation and collaboration among academia, industry, and government bodies. In addition, government-backed funding schemes and tax incentives for technology adoption are viewed as important drivers that can accelerate AI integration, particularly among start-ups and small to medium-sized enterprises (SMEs) that face financial constraints.

Beyond policy support, the expanding digital economy and technological advancements further strengthen opportunities for AI growth. Indonesia's booming digital economy—fueled by rising internet penetration and the widespread use of digital platforms—creates fertile ground for AI-driven business models across sectors such as online retail, fintech, health technology, and logistics. Informants noted that AI can act as a key differentiator by

helping businesses deliver faster, smarter, and more personalized services in a competitive market. Moreover, advances in cloud computing and data analytics have made AI integration more accessible, as companies can now leverage scalable, cloud-based AI solutions without the need for costly infrastructure. Subscription-based AI platforms enable even smaller firms to deploy sophisticated tools, thereby reducing entry barriers and promoting broader participation in Indonesia's digital transformation.

Threats to AI Implementation

Despite its strong potential, several external threats pose serious challenges to the sustainable implementation of Artificial Intelligence (AI) in Indonesia's digital business models. One of the most significant threats identified by informants is rapid technological change, as the constant evolution of AI tools and algorithms can quickly render existing systems obsolete. Businesses are pressured to continuously reinvest in new technologies, infrastructure, and employee training to remain competitive, which can be financially and operationally burdensome, especially for smaller enterprises. Another pressing concern is regulatory uncertainty and ethical dilemmas, given that Indonesia's legal framework for AI is still under development. Informants expressed apprehension regarding unclear data protection standards, ethical considerations in automated decision-making, and accountability for AI-related errors or biases. The absence of robust and transparent regulations generates uncertainty for businesses—particularly in sectors like finance and healthcare that rely on sensitive data—potentially deterring broader AI adoption.

In addition to regulatory and technological challenges, global competition and market dominance emerged as a substantial external threat. Informants noted that multinational technology corporations with advanced AI capabilities possess far greater resources and innovation capacity than local enterprises. This disparity can lead to dependence on foreign technologies and services, limiting the development of domestic AI industries. Over time, such dependency risks undermining Indonesia's technological sovereignty and constraining local innovation ecosystems. To ensure sustainable AI growth, Indonesia must therefore balance global collaboration with policies that strengthen local industry competitiveness, enhance data governance, and build resilience against external technological and market pressures.

Discussion

These findings highlight the complex interaction between internal capabilities and external environmental factors that influence the adoption of artificial intelligence (AI) in Indonesia's digital business ecosystem. Advantages such as efficiency, personalization, and data-driven insights demonstrate the transformative potential of AI in reshaping business models and enhancing competitiveness, in line with previous studies by Daoud et al. (2025) and Hendrayati et al. (2024), which found that AI integration drives customer-oriented agility and innovation in emerging markets. However, weaknesses—including high costs, skill shortages, and data management challenges—reflect structural and operational barriers similar to those identified by Afkar and Fathurrahmad (2023), who emphasize the financial and human resource constraints faced by SMEs in Southeast Asia. These limitations indicate that while AI can enhance productivity and innovation, its sustainable adoption requires capacity building and strategic investment in digital infrastructure and education.

Opportunities arising from supportive government policies and a rapidly growing digital economy point to a favorable environment for AI-driven growth, in line with the perspectives of Suraji et al. (2024) and Khan (2024), who note that national strategies such as Making Indonesia 4.0 and AI Strategy 2045 play a crucial role in driving digital transformation. However, threats such as technological disruption, regulatory uncertainty, and global competition reflect concerns expressed by Salgado-Reyes et al. (2024) and Shaikh (2024), who warn that the absence of a robust governance framework could hamper innovation and create dependence on foreign technology. A recurring theme in informant insights—and supported by previous research (Singh et al., 2025; García, 2024)—is that successful AI implementation depends not only on technological investment, but also on organizational readiness and human resource development. Companies that align their AI strategies with broader corporate goals and develop internal competencies through continuous learning, partnerships, and innovation are more likely to maintain long-term competitive advantage. Furthermore, AI adoption in Indonesia must be supported by ethical governance and regulatory alignment to build public trust and ensure responsible data use, as emphasized by Osokina and Leonenko (2024). Transparent, accountable, and inclusive AI practices will be key to strengthening consumer trust, attracting investment, and positioning Indonesia as a competitive player in the global digital economy.

4. Conclusion

The findings of this study highlight the dynamic interaction between internal capabilities and external conditions that shape the implementation of Artificial Intelligence (AI) in Indonesia's digital business ecosystem. Based on

the SWOT analysis, AI demonstrates substantial strengths in operational efficiency, automation, and customer personalization, which collectively enhance the competitiveness of digital enterprises. In addition, AI-driven analytics and predictive technologies enable data-informed decision-making that supports agility and innovation in an increasingly fast-paced digital environment. Nonetheless, the study identifies several weaknesses that hinder optimal AI adoption, including high investment costs, limited technical expertise among local professionals, and persistent issues of data quality and security. Unless these internal barriers are addressed through skill development, digital infrastructure improvement, and organizational adaptation, many small and medium-sized enterprises may find it difficult to realize the full benefits of AI integration. Externally, the opportunities for AI expansion in Indonesia are strengthened by government-backed digital transformation programs, rising internet penetration, and the growing adoption of digital services among consumers—all of which foster innovation and market expansion. However, challenges such as rapid technological shifts, unclear regulatory frameworks, ethical concerns, and global competition from dominant multinational corporations continue to pose significant risks to sustainable AI growth. In conclusion, the successful integration of AI into Indonesia's digital business models hinges on three key pillars: technological readiness, human capital advancement, and regulatory governance. Continuous investment in innovation and workforce training is crucial for enhancing organizational capability, while the government must develop a comprehensive policy framework that ensures ethical, secure, and inclusive AI implementation. Strengthening collaboration among industry, academia, and policymakers will be essential to build a resilient digital ecosystem in which AI serves as a catalyst for national competitiveness and long-term economic growth.

Reference

- [1] H. Hendrayati, M. Achyarsyah, F. Marimon, U. Hartono, and L. Putit, "The Impact of Artificial intelligence on Digital Marketing: Leveraging potential in a competitive business landscape," *Emerging Science Journal*, 2024.
- [2] H. Ashari and T. P. Nugrahanti, "Household economy challenges in fulfilling life needs during the Covid-19 pandemic," *Global Business and Economics Review*, vol. 25, no. 1, pp. 21–39, 2021.
- [3] Y. C. Zeldi, B. A. Prabowo, and Y. R. Satato, "Kebangkitan E-commerce Bertenaga AI: Mengubah Lanskap Bisnis di Tahun 2024," in *Prosiding Seminar Nasional Ilmu Manajemen Kewirausahaan Dan Bisnis*, 2024, pp. 237–259.
- [4] T. P. Nugrahanti and A. S. Jahja, "Audit judgment performance: The effect of performance incentives, obedience pressures and ethical perceptions," *Journal of Environmental Accounting and Management*, vol. 6, no. 3, pp. 225–234, 2018.
- [5] J. Riley, "AI powers the digital economy," *Ubiquity*, vol. 2023, no. December, pp. 1–10, 2023.
- [6] M. A. Afkar, "Transformasi bisnis dengan penerapan kecerdasan buatan (AI) pada sistem informasi dan teknologi digital: Tren utama tahun 2023," 2023.
- [7] R. Suraji and H. Ali, "Catalyzing change: Unleashing the power of artificial intelligence in Indonesian business," *International Journal of Advanced Multidisciplinary*, vol. 2, no. 4, pp. 952–961, 2024.
- [8] T. P. Nugrahanti, S. Lysandra, and H. Ashari, "Auditor Work Environment and Professional Judgment in Audit: Evidence from Indonesia," *Australasian Accounting, Business and Finance Journal*, vol. 18, no. 4, 2024.
- [9] H. Ashari, T. P. Nugrahanti, and B. J. Santoso, "The role of microfinance institutions during the COVID-19 pandemic," *Global Business and Economics Review*, vol. 30, no. 2, pp. 210–233, 2024.
- [10] I. Agustina, H. Kuan, B. Aditi, S. A. Sitorus, and T. P. Nugrahanti, "Renewable energy mix enhancement: the power of foreign investment and green policies," *International Journal of Energy Economics and Policy*, vol. 13, no. 6, pp. 370–380, 2023.
- [11] M. Daoud, A. Ennoui, and M. A. Sabri, "The Strategic Role of AI in Business Digital Transformation: Opportunities and Challenges," in *2025 International Conference on Circuit, Systems and Communication (ICCS)*, IEEE, 2025, pp. 1–6.
- [12] N. Salgado-Reyes, D. Nicolalde-Rodriguez, J. Meza, and M. Vaca-Cardenas, "Artificial intelligence and its impact on digital transformation processes," in *Multidisciplinary International Conference of Research Applied to Defense and Security*, Springer, 2023, pp. 37–44.
- [13] Z. P. Shaikh, "Leveraging Artificial Intelligence for Digital Actionable Transformation of Business: Strategies for Integrating Intelligent Technologies," in *Business Transformation in the Era of Digital Disruption*, IGI Global, 2025, pp. 181–212.
- [14] A. K. Singh, S. Taterh, A. Kaushik, and A. Goswami, "The Role of AI in Digital Transformation," in *Human-Centric AI in Digital Transformation and Entrepreneurship*, IGI Global Scientific Publishing, 2025, pp. 109–136.
- [15] J. Jobstreibizer, T. Beliaeva, M. Ferasso, S. Kraus, and A. Kallmuenzer, "The impact of artificial intelligence on business models: a bibliometric-systematic literature review," *Management Decision*, vol. 63, no. 13, pp. 372–396, 2025.
- [16] A. Aagaard and C. Tucci, "AI-driven business model innovation: pioneering new frontiers in value creation," in *Business Model Innovation: Game Changers and Contemporary Issues*, Springer International Publishing Cham, 2024, pp. 295–328.
- [17] M. Kayyali, "The Role of Artificial Intelligence in Transforming Business Models," in *AI-Driven Business Model Innovation*, IGI Global Scientific Publishing, 2025, pp. 71–98.
- [18] D. Paschek, C. T. Luminosu, and A. Draghici, "Automated business process management—in times of digital transformation using machine learning or artificial intelligence," in *MATEC web of conferences*, EDP Sciences, 2017, p. 04007.
- [19] D. L. E. Garcia, "La Inteligencia Artificial como Apoyo en los Procesos de la Administración Empresarial," *Ciencia Latina Revista Científica Multidisciplinar*, vol. 8, no. 6, pp. 2408–2420, 2024.
- [20] A. Osočina and O. Leonenko, "Цифрова трансформація процесів на основі впровадження технологій штучного інтелекту," *Економіка та суспільство*, no. 67, 2024.
- [21] J. W. Creswell and J. D. Creswell, *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications, 2017.
- [22] M. B. Miles and A. M. Huberman, *Qualitative data analysis: An expanded sourcebook*. sage, 1994.