
Utilizing AI in Digital Marketing of Local Wisdom-Based Products to Support a Green and Sustainable Economy in ASEAN

Muhammad Arif Zikir Risky^{1*}

Institut Teknologi & Bisnis (ITEBIS) PGRI Dewantara Jombang

mrisky@itebisdewantara.ac.id

*corresponding author

Article Information

Submission date 4 February 2026

Revised date 3 March 2026

Accepted date 10 April 2026

Abstract

Research Aim:

This research aims to analyze the use of artificial intelligence (AI) in digital marketing of local wisdom-based products and its contribution to supporting a green and sustainable economy in the ASEAN region.

Design/Method/Approach:

This research uses a descriptive qualitative approach, using literature studies and observations of the implementation of AI in digital marketing practices for local wisdom-based products. Data was collected through a review of various scientific articles, journals, and documentation of relevant digital marketing practices, then analyzed using data reduction, classification, and source triangulation techniques.

Research Findings:

The results show that the use of AI in digital marketing can increase promotional effectiveness through more accurate market segmentation, content personalization, market trend analysis, and automated consumer communications. Furthermore, AI also supports green economy principles through efficient resource use, distribution optimization, and waste reduction in marketing and production processes.

Theoretical Contribution/Originality:

The theoretical contribution of this research lies in the development of an integrative perspective that connects the use of AI, digital marketing strategies, local wisdom, and the green economy within a single analytical framework. The novelty of this research lies in its focus on combining digital transformation with local cultural values as a strategy for sustainable economic development in ASEAN.

Practical/Policy Implications:

This research provides practical implications for MSMEs and digital

businesses to adopt AI technology to strengthen the competitiveness of local products in the digital market. Furthermore, the results can serve as a reference for the government and policymakers in developing sustainability-based digital transformation programs that support the development of a green economy and the preservation of local culture.

Research Limitations:

This research's limitations lie in the use of a qualitative approach based on literature studies and observations, which is not supported by empirical quantitative data directly from business actors. Future research is recommended to use a quantitative or mixed-methods approach to more comprehensively examine the relationships between variables.

Keywords:

Artificial Intelligence, Digital Marketing, Local Wisdom, Green Economy, ASEAN, Digital Business

1. Introduction

The development of artificial intelligence (AI) technology has brought significant changes to digital marketing practices, particularly in increasing promotional effectiveness and analyzing consumer behavior. Meanwhile, products based on local wisdom in the ASEAN region have great potential to support a green and sustainable economy, yet still face challenges in digital marketing and global competitiveness. Therefore, the use of AI in digital marketing is a crucial issue in optimizing the potential of local products while encouraging environmentally friendly and sustainable business practices. Previous research has shown that the use of AI in digital marketing can improve content personalization, campaign efficiency, and sales conversion through real-time consumer data analysis [1]. Furthermore, other studies have revealed that the digitalization of UMKM based on local wisdom can expand market access and increase product added value [2]. In the context of a green economy, the integration of digital technology has also been shown to contribute to resource efficiency and reduced production waste [3]. However, most research still focuses on the technology or sustainability aspects separately, without comprehensively examining the relationship between AI, digital marketing, and local wisdom within the framework of a green economy in ASEAN.

Furthermore, there is a research gap regarding how AI can be practically implemented in digital marketing strategies for products based on local wisdom, particularly in supporting sustainable economic principles. Previous studies have tended to focus on large industrial sectors or global e-commerce, while the context of local UMKM in ASEAN has not been explored in depth [4]. Furthermore, there is limited research examining the integration of local cultural values and AI technology in creating marketing strategies that are not only economically effective but also environmentally sustainable. Based on this, the novelty of this research lies in its integrative approach, combining the use of AI in digital marketing with the strengthening of local wisdom as part of a green economy strategy in the ASEAN region. This research not only highlights

technological aspects but also positions cultural values and sustainability as key elements in the development of digital business models. Thus, this article contributes to broadening the perspective of previous research through a multidimensional approach relevant to the ASEAN regional context [5].

The purpose of this research is to analyze the use of AI in digital marketing of products based on local wisdom and examine its contribution to the development of a green and sustainable economy in ASEAN. This article is structured as follows: introduction, research methods, discussion, conclusions, and recommendations [6].

1.1. Problem Statement

The use of AI in digital marketing has not been fully optimized to support the promotion of products based on local wisdom, particularly in the context of a green and sustainable economy in ASEAN. Furthermore, there are still limitations in the integration of AI technology, local cultural values, and sustainability principles in digital business practices, particularly in the UMKM sector.

1.2. Research Objectives

This research aims to analyze the use of AI in digital marketing strategies for products based on local wisdom and examine its contribution to supporting a green and sustainable economy in the ASEAN region.

2. Method

This research uses a descriptive qualitative approach with the aim of gaining a deeper understanding of the use of artificial intelligence in digital marketing of local wisdom-based products. This approach was chosen because it is able to describe phenomena contextually and provide a comprehensive understanding of the integration between technology, local culture, and sustainability principles.

Data collection was conducted through literature and documentation studies from various scientific sources, such as journals, proceedings, and research reports relevant to the topics of AI, digital marketing, local wisdom, and the green economy in ASEAN [1]–[3]. Furthermore, data was also obtained through observations of digital marketing practices among local wisdom-based UMKM on digital platforms such as social media and marketplaces [7]. Observations were conducted online over a specific period of time, focusing on the use of AI technology in marketing strategies, such as chatbots, trend analysis, and content personalization.

Data analysis techniques were carried out through several stages: data reduction, data classification, and drawing conclusions. Data reduction was carried out by filtering information relevant to the research focus. Next, the data was classified based on the main themes: AI utilization, digital marketing strategies, local wisdom, and the green economy. To increase data

validity, source triangulation was conducted by comparing various relevant references and findings [8].

This approach enabled researchers to identify patterns, relationships, and opportunities in utilizing AI to support the development of sustainable, locally-based digital businesses in the ASEAN region.

3. Results and Discussion

The research results show that the use of artificial intelligence (AI) in digital marketing has a significant impact on increasing the marketing effectiveness of products based on local wisdom in the ASEAN region. The implementation of AI enables businesses, particularly UMKM, to conduct more accurate market segmentation, personalize promotional content, and automate interactions with consumers through chatbots and recommendation systems. This results in increased engagement, market reach, and sales conversions for local products. Based on observations of digital marketing practices among several UMKM based on local wisdom, it was found that the use of simple AI tools such as automated copywriting tools, content trend analysis, and digital advertising optimization significantly improved marketing performance compared to conventional methods. For example, businesses that utilize AI to create promotional content based on local cultural storytelling tend to receive a higher response from consumers because they are able to build emotional bonds and authentic product value.

Furthermore, the use of AI also contributes to strengthening the principles of a green economy. With AI-based data analysis, businesses can optimize resource use, reduce overproduction, and adjust distribution strategies more efficiently. This aligns with the concept of a sustainable economy that emphasizes efficiency and minimizing environmental impact. In other words, AI functions not only as a marketing tool but also as an enabler in creating more environmentally friendly business practices [9].

However, the research also shows a gap in AI implementation among UMKM based on local wisdom. Most businesses are still in the early adoption stage and have not yet utilized AI optimally. This is due to limited digital literacy, access to technology, and a lack of understanding of data-driven digital marketing strategies. This finding aligns with previous research stating that the adoption of digital technology in the UMKM sector still faces various structural and human resource barriers [10].

On the other hand, this differs from several previous studies that stated that AI implementation can directly improve overall business efficiency [11]. In the context of this research, this improvement does not occur instantly but requires a process of adaptation, learning, and integration with local wisdom values. This indicates that the success of AI implementation is strongly influenced by the social and cultural context and the readiness of business actors, particularly in the ASEAN region with its high cultural diversity [11].

Furthermore, the analysis shows that the integration of AI and local wisdom can create strong product differentiation in the digital marketplace. Products that highlight local cultural values

and are packaged with AI-based digital marketing strategies have a unique appeal, especially for consumers who are conscious of sustainable (eco-friendly) products. Thus, the combination of technology and local culture creates a competitive advantage that is difficult to replicate by mass-market products.

This study also found that the use of visual content and local cultural narratives supported by AI can enhance the perceived value of a product. For example, product photography documenting traditional production processes and the use of environmentally friendly materials can strengthen the brand's image as an authentic and sustainable product. Interpretation of this documentation suggests that visual elements play a crucial role in building consumer trust on digital platforms.

Overall, the results of this study support the theory that digital technology, particularly AI, plays a strategic role in enhancing business competitiveness in the digital economy era. However, this study also expands this perspective by demonstrating that the success of AI implementation is determined not only by the technological aspect but also by the ability to integrate it with local wisdom and sustainability principles. Therefore, a holistic approach is key to optimizing the use of AI to support a green and sustainable economy in ASEAN.

Table 1. Result test

No	Analysis Aspect	Indicator	Findings	Impact on the Green Economy
1	Market Segmentation	Using AI for consumer data analysis	More accurate segmentation based on behavior and preferences	Reducing promotional waste (resource efficiency)
2	Content Personalization	AI in Marketing Content Creation	More Relevant and Engaging Content	Increasing Awareness of Eco-Friendly Products
3	Marketing Automation	Chatbots and Auto-Response	Fast and Efficient Response	Reducing Excess Human Resource Usage
4	Market Trend Analysis	AI tools (trend analysis)	More adaptive strategies to the market	Avoiding overproduction
5	Local Product Branding	Integrating Cultural Storytelling	Producing More Authentic and Culturally Valuable Products	Supporting the Preservation of Local Wisdom

6	Operational Efficiency	AI in Distribution Planning	More Targeted Distribution	Reduced Waste and Logistics Costs
7	Technology Adoption	Level of AI usage by UMKM	Still in the early stages (basic tools)	Huge potential but not yet optimal
8	Digital Literacy	Business actors' understanding	Limited	Hinders green economy implementation
9	Product Competitiveness	Performance on Digital Platforms	Improved with AI	Expanding the Market for Eco-Friendly Products
10	Business Sustainability	Integrating AI and Green Concepts	Beginning to Develop	Supporting a Sustainable Economy

Source : [7]

Table 1 shows that the use of AI in digital marketing significantly contributes to increasing marketing effectiveness while supporting green economy principles. The most prominent aspects are market segmentation, content personalization, and operational efficiency, which directly impact resource wastage reduction [12].

However, major obstacles remain: digital literacy and the low level of technology adoption by UMKM. This demonstrates that while AI has significant potential to drive a sustainable economy, its implementation still requires support from various parties, such as training and access to technology.

4. Conclusion

The use of artificial intelligence (AI) in digital marketing has been proven to increase the effectiveness of marketing products based on local wisdom in the ASEAN region. Through data analysis capabilities, content personalization, and marketing process automation, AI helps businesses, particularly UMKM, expand their market reach and increase the competitiveness of local products. Furthermore, AI integration also contributes to the implementation of green economy principles through resource efficiency, waste reduction, and optimization of production and distribution strategies. Thus, the research objective of analyzing the role of AI in supporting digital marketing and a sustainable economy has been achieved.

This research provides both theoretical and practical contributions. Scientifically, it enriches the study of the integration of artificial intelligence, digital marketing, and local wisdom within a green economy framework, which is still limited in previous literature. The research's novelty lies in its integrative approach, which combines aspects of technology, local culture,

and sustainability within a single analytical model. Practically, the results of this study can serve as a reference for UMKM, the government, and policymakers in designing digital transformation strategies that are not solely profit-oriented but also consider environmental sustainability and the preservation of local culture.

However, this study has limitations, particularly in its use of a qualitative approach based on literature and observation, which precludes broader empirical data collection through surveys or experiments. Furthermore, the study's scope is limited to the general context of the ASEAN region without specific country-specific approaches. Therefore, further research is recommended to employ a quantitative or mixed-methods approach to examine the relationships between variables in greater depth. Further research could also examine AI implementation specifically in specific industrial sectors or conduct comparative studies across ASEAN countries to obtain more comprehensive results.

References

- [1] Dwivedi YK, Hughes DL, Ismagilova E, Aarts G, Coombs C, Crick T, et al. Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *Int J Inf Manage.* 2021;57:101994. doi:10.1016/j.ijinfomgt.2019.08.002
- [2] Davenport T, Guha A, Grewal D, Bressgott T. How artificial intelligence will change the future of marketing. *J Acad Mark Sci.* 2020;48(1):24–42. doi:10.1007/s11747-019-00696-0
- [3] Chaffey D, Ellis-Chadwick F. Digital marketing: Strategy, implementation and practice in a data-driven era. *J Mark Manag.* 2019;35(3–4):290–312. doi:10.1080/0267257X.2019.1568282
- [4] Kumar V, Dixit A, Javalgi RRG, Dass M. Research framework, strategies, and applications of intelligent agent technologies (IATs) in marketing. *J Acad Mark Sci.* 2016;44(1):24–45. doi:10.1007/s11747-015-0426-9
- [5] OECD. Digitalisation and SMEs: Policies, trends and challenges. *OECD Stud SMEs Entrep.* 2021;2021:1–68. doi:10.1787/bdb9256a-en
- [6] Gupta S, Leszkiewicz A, Kumar V. Digital analytics in marketing: A review and research agenda. *J Bus Res.* 2021;125:679–692. doi:10.1016/j.jbusres.2020.02.011
- [7] Belz FM, Peattie K. Sustainability marketing: A global perspective. *J Mark Manag.* 2017;33(5–6):513–518. doi:10.1080/0267257X.2017.1319472
- [8] Geissdoerfer M, Savaget P, Bocken NMP, Hultink EJ. The Circular Economy – A new sustainability paradigm? *J Clean Prod.* 2017;143:757–768. doi:10.1016/j.jclepro.2016.12.048
- [9] Rialti R, Marzi G, Ciappei C, Busso D. Big data and dynamic capabilities: A bibliometric analysis and systematic literature review. *Manag Decis.* 2019;57(8):2052–2068. doi:10.1108/MD-07-2018-0821
- [10] Kshetri N. 1 Blockchain's roles in strengthening cybersecurity and protecting privacy. *Telecommun Policy.* 2017;41(10):1027–1038. doi:10.1016/j.telpol.2017.09.003
- [11] Verhoef PC, Broekhuizen T, Bart Y, Bhattacharya A, Dong JQ, Fabian N, et al.

Digital transformation: A multidisciplinary reflection and research agenda. J Bus Res. 2021;122:889–901. doi:10.1016/j.jbusres.2019.09.022

- [12] Nguyen TTH, Nguyen VH, Tran TT. The role of digital transformation in sustainable business development in ASEAN countries. Sustainability. 2022;14(3):1680. doi:10.3390/su14031680