

Optimizing AI for Competitive Growth at Digital Marketing Agencies in Indonesia

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Abstract

Artificial intelligence (AI) has increasingly transformed digital marketing practices by supporting content creation, data analysis, reporting, campaign preparation, creative production, and service innovation. However, the adoption of AI does not automatically lead to optimal business outcomes. This study examines how Indonesian digital marketing agencies adopt and optimize AI for competitive growth. Using a qualitative multiple case study approach, this research analyzes three digital marketing agencies in Indonesia: Socioworks, IND! Communication, and Pepple Digital. Data were collected through semi-structured interviews with agency owners, managers, and decision-makers, supported by digital observation and secondary data. The data were analyzed using the Gioia Method and interpreted through the Technology Acceptance Model (TAM) and the Technology-Organization-Environment (TOE) framework. The findings show that AI adoption is mainly driven by operational efficiency, competitive pressure, and business growth opportunities. However, AI optimization is constrained by human capability gaps, generic AI outputs, fragmented workflows, tool integration barriers, and unclear cost-performance measurement. The study concludes that AI can support competitive growth only when agencies move beyond basic task-based AI usage toward structured, integrated, and client-value-oriented AI optimization. The proposed business solutions include AI capability development, strategic AI investment and governance, workflow optimization, service innovation, and AI-assisted service packaging.

INTRODUCTION

Artificial intelligence has become one of the most influential technologies in contemporary business transformation. In marketing, AI is increasingly used to support automation, personalization, customer analysis, content creation, decision-making, and campaign optimization. Previous studies show that AI can improve marketing performance by supporting internal business processes, customer-related performance, learning and growth, and financial outcomes (Abrokwah-Larbi & Awuku-Larbi, 2024). AI has also been recognized as a technology that can assist marketing activities through automation, precision targeting, massive data processing, and service improvement (Haleem et al., 2022).

The development of AI is highly relevant for digital marketing agencies because these agencies operate in an industry that requires speed, creativity, flexibility, and continuous adaptation. Digital marketing activities have shifted from basic online promotion into more data-driven, personalized, and interactive communication. In this environment, AI supports companies in creating content, analyzing consumer behavior, improving user experience, generating leads, and reducing repetitive tasks (Kurniawan et al., 2024). AI also accelerates

digital transformation in emerging markets by supporting the use of social media and digital platforms for communication, interaction, and value creation (Emon, 2025).

In the digital marketing landscape, AI has created a significant paradigm shift. Faruk et al. (2026) explain that AI has moved digital marketing from basic social media interaction toward more advanced predictive analytics and content automation. Similarly, Masnita et al. (2024) show that AI is increasingly used to shape customer experience and marketing analytics, although future research still needs to address data constraints and practical implementation challenges. This indicates that AI is not only a supporting technology, but also an important element in the transformation of marketing practices.

Digital marketing agencies face strong pressure because clients demand faster outputs, relevant content, and measurable campaign results. Consumer behavior also changes rapidly, especially among younger audiences who expect immediate access to trends, personalized content, and fast brand responses. Santoso and Artha (2025) argue that modern audiences, especially Generation Z, create environmental pressure for marketers to become more adaptive and flexible. Therefore, digital marketing agencies are pushed to use AI not only to improve internal productivity but also to respond to market expectations.

However, AI adoption does not always become AI optimization. Although AI can support content ideation, caption writing, reporting, proposal preparation, research, visual references, and creative production, many agencies still use AI in a basic and fragmented way. AI tools may be accessible, but their outputs often require human revision, quality control, and strategic adjustment. Suarantalla (2025) argues that the role of AI in digital marketing optimization is often limited by a capability gap in human resources. Faridatul and Purwanto (2025) also highlight that AI implementation in digital marketing faces challenges related to technological infrastructure, limited skills, and the need for human expertise.

Technology readiness is also important in understanding why technology adoption does not automatically lead to optimization. Astuti and Nasution (2014), in their study of SME entrepreneurs in Bandung, found that entrepreneurs had only a moderate level of technology readiness, while internet adoption for promotional media remained relatively low. Their study explains that technology readiness is shaped by positive drivers such as optimism and innovativeness, but also inhibited by discomfort and insecurity. This finding is relevant to AI adoption in digital marketing agencies because the availability of AI tools does not guarantee that employees or managers are ready to use them strategically. Agencies may recognize the benefits of AI, but adoption can remain limited when users feel uncertain, lack confidence, or are uncomfortable with new technological processes.

The challenges of AI adoption are multidimensional. Enshassi et al. (2025) identify several barriers to AI adoption in digital marketing, including lack of machine learning knowledge, limited organizational commitment, uncertainty about return on investment, lack of skills and tools, and limited funding. These barriers show that AI optimization is not only a technological problem but also an organizational and strategic problem. Agencies may subscribe to AI tools, but the business value of AI depends on how well those tools are integrated into workflow, human capability, and service delivery.

Based on this background, this study examines AI optimization in three Indonesian digital marketing agencies: Socioworks, IND! Communication, and Pepple Digital. The study focuses on how these agencies adopt AI, what motivates their adoption, what barriers prevent

AI from being optimized, and what business strategies can help agencies transform AI into a source of competitive growth..

METHOD

To address the AI adoption–optimization gap identified in the introduction, this study employed a qualitative research approach using a multiple case study design. This approach was selected because AI optimization in digital marketing agencies is a contextual and process-based phenomenon that requires in-depth understanding of managerial decisions, employee capability, workflow practices, and client-related pressures. Rather than measuring AI adoption statistically, this study aimed to explore how agencies experience, interpret, and respond to AI adoption in their daily business operations.

The research was conducted in three Indonesian digital marketing agencies: Socioworks, IND! Communication, and Pepple Digital. These agencies were selected because they represent different patterns of AI use and optimization. Socioworks illustrates AI use in social media workflow, reporting, content ideation, and production support. IND! Communication illustrates AI use in brainstorming, proposal preparation, pitching support, and margin protection for budget-constrained projects. Pepple Digital illustrates a more growth-oriented approach through AI investment, creative production, AI-assisted website services, and automation experimentation. By comparing these three cases, the study was able to identify similarities and differences in AI motivations, barriers, and business strategies.

Digital observation and secondary data were used to support the interview findings. The researcher reviewed publicly available digital materials, including agency websites, Instagram accounts, online portfolios, service descriptions, campaign examples, captions, and other public company information. These sources were used to understand each agency's positioning, services, and digital presence. They also helped triangulate interview findings by comparing informants' explanations with public evidence of agency activities.

The data were analyzed using the Gioia Method. This method was selected because it provides a systematic approach for transforming qualitative interview data into structured theoretical findings. Gioia et al. (2012) explain that qualitative data analysis can move from informant-centric 1st-order concepts to researcher-centric 2nd-order themes and finally to aggregate dimensions. In this study, the analysis began with repeated reading of interview transcripts and notes. Relevant statements were then coded into 1st-order concepts that stayed close to the informants' original expressions, such as faster work, AI-generated scripts, disconnected tools, human revision, AI subscription costs, and AI-assisted service opportunities.

The findings were then interpreted using TAM and TOE as theoretical lenses. TAM helped explain why agencies perceived AI as useful for improving speed, productivity, and service capacity, but also why ease of use remained limited by prompting ability, output evaluation, and human revision. TOE helped explain how AI optimization was influenced by technological issues, organizational readiness, and environmental pressures. Through this research method, the study was able to connect empirical findings from the three agencies with broader theoretical explanations of AI adoption and optimization.

Research Objectives

The main objective of this study is to analyze how digital marketing agencies in Indonesia can optimize AI adoption for competitive growth. Specifically, the research objectives are:

1. To identify and analyze the main motivations influencing Indonesian digital marketing agencies to adopt and optimize AI in their business operations.
2. To examine the key challenges and barriers that prevent Indonesian digital marketing agencies from fully optimizing AI.
3. To develop practical business strategies that enable Indonesian digital marketing agencies to optimize AI adoption for competitive growth.

These objectives are important because AI adoption alone is not sufficient to create sustainable advantage. Previous research shows that AI can support business performance when organizations align technological readiness with strategic business models (Alwakid & Dahri, 2025). Therefore, this study does not only ask whether agencies use AI, but also how AI can be transformed from a basic productivity tool into a structured organizational capability.

Significance of The Study

This study provides theoretical and practical contributions. Theoretically, this research contributes to AI adoption literature by integrating TAM and TOE in the context of digital marketing agencies. TAM explains how agency actors perceive AI in terms of usefulness and ease of use. TOE explains how AI optimization is shaped by technological capability, organizational readiness, and environmental pressure. This combination is important because AI adoption is not only an individual acceptance issue but also an organizational transformation issue.

This study also contributes to the discussion of technology readiness in Indonesian business contexts. Astuti and Nasution (2014) show that technology readiness among Indonesian SMEs is influenced by both readiness drivers and readiness barriers. In the context of this research, this supports the argument that AI optimization depends not only on access to digital tools, but also on whether agency actors are prepared, confident, and capable of using AI in daily business processes. Therefore, this study extends the discussion of technology readiness from general SME digital adoption to AI optimization in digital marketing agencies.

This study also contributes to the discussion of AI readiness and ethical business transformation. Kulkarni et al. (2024) emphasize that AI readiness among MSMEs is related to social sustainability and business ethics. This is relevant because digital marketing agencies must not only use AI efficiently but also ensure that AI-generated outputs remain accurate, ethical, original, and aligned with client needs. In addition, Mota et al. (2026) show that unchecked generative AI adoption can create risks such as generic responses, factual hallucinations, and loss of authenticity. Therefore, human judgment remains essential in AI-supported agency work.

Practically, this study provides insights for digital marketing agency owners and managers. AI is widely available and easy to access, but competitive advantage does not come from using popular tools alone. Advantage comes from how agencies combine AI tools with human expertise, workflow discipline, brand understanding, quality control, and client-value creation. This is especially important for Indonesian SMEs and agencies because previous

research shows that AI adoption among MSMEs is influenced by perceived usefulness, technological readiness, and environmental pressure (Santosa & Surgawati, 2024).

This research is also significant because it helps agencies avoid unrealistic assumptions about AI. AI does not automatically reduce costs, eliminate human labor, or increase sales performance. Instead, AI creates value when agencies manage it through training, governance, workflow integration, and service innovation. Therefore, this study provides a practical foundation for agencies that want to move from basic AI usage toward structured AI optimization..

RESULTS AND DISCUSSION

The findings of this study are organized into three aggregate dimensions: motivations, challenges/barriers, and business strategies. These themes were developed using the Gioia Method, which allows qualitative data to be organized into 1st-order concepts, 2nd-order themes, and aggregate dimensions (Gioia et al., 2012). The Gioia Method is useful because it preserves informant-based insights while allowing the researcher to develop theoretical interpretation.

Motivations for AI Adoption

The first major motivation for AI adoption is operational efficiency. Across the three agencies, AI is used to accelerate daily work such as content ideation, caption writing, reporting, proposal preparation, research, visual reference generation, editing, and creative production. These findings support the argument that AI can improve business efficiency and support organizational performance when it is applied to relevant work processes (Abrokwah-Larbi & Awuku-Larbi, 2024).

At Socioworks, AI is used to support reporting, social media work, content ideation, caption development, and creative assistance. AI helps the team analyze reports, generate ideas, and prepare content-related materials faster. However, AI outputs are not directly sent to clients because they still require human review, editing, and contextual adjustment.

At IND! Communication, AI is used for brainstorming, proposal preparation, pitching support, moodboard development, and initial research. Ibu Asti explained that AI helps the team increase speed and work capacity, especially when handling urgent proposals or budget-constrained projects. This finding is consistent with Ash Shodiq and Agustina (2025), who found that ChatGPT can accelerate managerial decision-making and support marketing strategy formulation when used properly.

At Pepple Digital, AI is used not only for content and creative work but also for new service development. Pak Lincoln explained that AI helps the agency develop AI-assisted website and web commerce services. This shows that AI can create opportunities for service innovation. Uddin et al. (2025) also found that AI can accelerate digital marketing workflows when it is supported by proper organizational training.

The second motivation is competitive pressure. Digital marketing agencies operate in a fast-moving market where clients expect faster outputs, quicker revisions, and more efficient service delivery. This pressure encourages agencies to adopt AI because AI can help reduce work time and increase responsiveness. Sidi et al. (2024) explain that creative industry actors must be aware of technological disruption and innovation in order to remain competitive. Therefore, AI adoption becomes a strategic response to market competition.

The third motivation is business growth. AI allows agencies to increase team capacity, protect margins, develop new services, and explore new revenue opportunities. For example, Pepple Digital's AI-assisted website service shows how AI can be commercialized into a new business offering. Liliana et al. (2025) also show that AI-based digital marketing interventions can positively affect marketing efficiency when supported by intensive training. This suggests that AI can support growth when agencies combine tools with capability development.

Challenges and Barriers to AI Optimization

Although AI is perceived as useful, the findings show that AI optimization remains limited by several barriers. The first barrier is the human capability and learning gap. AI tools may be easy to access, but they are not always easy to optimize. Employees still need prompting skills, critical thinking, brand understanding, and the ability to evaluate AI-generated outputs. This finding supports Mustofa et al. (2025), who argue that AI adoption is influenced not only by usefulness and ease of use but also by trust and ethical considerations.

This finding is also consistent with Astuti and Nasution (2014), who explain that technology readiness consists of both enabling and inhibiting factors. Optimism and innovativeness may encourage users to adopt technology, while discomfort and insecurity may reduce their willingness or confidence to use it effectively. In the context of AI adoption, this means that agency employees may understand that AI is useful, but still experience uncertainty when they need to prompt, verify, revise, and apply AI outputs to client work. Therefore, the human capability gap found in this study is not only a skill issue, but also a readiness issue.

In agency work, the human capability gap becomes very important because AI-generated content cannot always be used directly. AI may produce outputs that are too generic, stiff, robotic, or misaligned with the client's brand voice. Alawamleh et al. (2024) explain that AI has inherent limitations and still requires human insight for business application. This is consistent with the findings of this study, where AI is useful for first drafts but still requires human supervision.

The second barrier is AI output quality limitation. AI outputs can help accelerate content creation, but they often require revision before becoming client-ready. Pak Lincoln explained that when employees rely too much on AI without proper editing, the output can sound rigid and unnatural. Kak Diza also emphasized that AI outputs must be sorted, revised, and checked before being used. This supports Daly et al. (2025), who argue that human-AI collaboration depends on trust, sensemaking, transparency, and human agency.

The third barrier is workflow and tool integration. Agencies often use different tools for different tasks, such as text generation, design, editing, scheduling, analytics, and reporting. However, these tools are not always connected into a seamless workflow. As a result, employees still need to manually transfer files, revise outputs, and adjust formats across platforms. This confirms the TOE perspective that technological context affects adoption outcomes. Nguyen et al. (2022) explain that technology adoption depends on the interaction between technological readiness, organizational readiness, and environmental conditions.

The fourth barrier is cost and performance measurement. AI requires subscription fees, experimentation time, training, human review, and output correction. Therefore, AI does not automatically reduce total operational costs. Pepple Digital, for example, invested in premium AI tools as part of a longer-term business strategy. Socioworks still needs human workers to

operate AI, review outputs, and maintain client quality. IND! Communication experiences AI value more in terms of speed, capacity, and margin protection, rather than direct sales growth.

This finding is important because AI's value should not only be measured through immediate revenue. AI value can also be measured through time saved, increased output capacity, faster proposal preparation, higher revision speed, workload reduction, better service flexibility, and new service opportunities. Alwakid and Dahri (2025) argue that AI can support sustainable business performance when organizations align AI adoption with strategic readiness. Therefore, agencies need proper performance indicators to evaluate AI's contribution.

Discussion through TAM and TOE

The findings show that AI has high Perceived Usefulness but complicated Perceived Ease of Use. Agencies adopt AI because it helps them work faster, generate ideas, support reporting, prepare proposals, and explore new services. This supports Davis's (1989) explanation that perceived usefulness is a key factor in technology acceptance. However, AI optimization remains difficult because employees must know how to prompt, verify, revise, and contextualize AI outputs.

TAM is therefore useful for explaining why agencies adopt AI, but it is not enough to explain why AI remains under-optimized. The TOE framework provides a broader explanation. In the technological context, AI offers speed, automation, and creative support, but tools remain fragmented and outputs still require review. In the organizational context, AI optimization depends on employee skills, leadership support, training, workflow discipline, and governance. In the environmental context, client expectations, competitor pressure, and market speed push agencies to adopt AI more aggressively.

Enshassi et al. (2025) show that AI adoption barriers include knowledge gaps, limited tools, privacy concerns, weak organizational commitment, and uncertain ROI. These barriers are reflected in the findings of this study, particularly in human capability gaps, workflow fragmentation, and cost-performance challenges. ul Haq and Suki (2025) also argue that AI-driven innovation in SMEs requires the integration of TAM and TOE because perceived usefulness, technological ease, organizational readiness, and environmental pressure jointly shape adoption.

Technology readiness strengthens this interpretation because AI optimization requires not only access to tools but also psychological and organizational readiness. Astuti and Nasution (2014) show that technology readiness includes optimism, innovativeness, discomfort, and insecurity. In this study, optimism and innovativeness are reflected in the willingness of agencies to explore AI for efficiency and new services, while discomfort and insecurity are reflected in employee uncertainty, uneven prompting capability, concern over output quality, and the continuing need for human review.

The findings also show that AI should not be treated as a replacement for human creativity. In digital marketing agencies, human judgment remains important because outputs must align with client briefs, brand identity, communication strategy, and audience expectations. This is consistent with Mota et al. (2026), who warn that unchecked AI adoption may produce generic content and reduce authenticity. Therefore, AI optimization should be understood as human-AI collaboration rather than full automation.

In summary, the study confirms that AI adoption does not automatically create competitive advantage. AI tools are widely accessible and can be imitated by competitors. Competitive advantage emerges when agencies combine AI tools with human capability, workflow integration, governance, and service innovation.

CONCLUSION

This study concluded that AI adoption among Indonesian digital marketing agencies is driven by the need for operational efficiency, competitive advantage, and business growth. AI supports various activities, including content creation, reporting, research, proposal preparation, and service development, demonstrating its high usefulness in digital marketing operations. However, AI adoption does not automatically lead to optimization due to challenges such as limited employee skills, generic AI outputs, workflow integration issues, subscription costs, and the need for human supervision. Therefore, AI should be managed as an organizational capability rather than merely a technological tool. Agencies need to strengthen AI literacy, improve workflow integration, establish governance systems, and transform AI usage into client value. From a theoretical perspective, the Technology Acceptance Model (TAM) and Technology–Organization–Environment (TOE) framework complement each other by explaining AI adoption from both user acceptance and organizational strategy perspectives. Based on these findings, four business solutions are proposed: developing employee AI capabilities through training and knowledge-sharing programs, implementing strategic AI investment and governance to ensure effective tool selection and usage, optimizing workflows and creating AI-supported services, and developing AI-assisted service packages that balance automation with human expertise. Agencies should position AI as a tool to enhance productivity, innovation, and service quality while maintaining human creativity, strategic thinking, and quality control as key competitive factors.

REFERENCES

- Abrokwah-Larbi, K., & Awuku-Larbi, Y. (2024). The impact of artificial intelligence in marketing on the performance of business organizations: Evidence from SMEs in an emerging economy. *Journal of Entrepreneurship in Emerging Economies*, 16(4), 1090–1117.
- Alawamleh, M., Shammash, N., Alawamleh, K., & Bani Ismail, L. (2024). Examining the limitations of AI in business and the need for human insights using interpretive structural modelling. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(1), 100338. <https://doi.org/10.1016/j.joitmc.2024.100338>
- Alwakid, W. N., & Dahri, N. A. (2025). Harnessing AI for sustainable business performance. *Technology in Society*, 83, 103007. <https://doi.org/10.1016/j.techsoc.2025.103007>
- Ash Shodiq, M. R., & Agustina, N. F. (2025). Analisis dampak Artificial Intelligence ChatGPT terhadap kecepatan pengambilan keputusan manajerial dalam rekomendasi strategi pemasaran. *Jurnal Ilmiah Wahana Pendidikan*, 11(6.C), 110–117.
- Astuti, N. C., & Nasution, R. A. (2014). Technology readiness and e-commerce adoption among entrepreneurs of SMEs in Bandung City, Indonesia. *Gadjah Mada International Journal of Business*, 16(1), 69–88.
- Daly, S. J., Hearn, G., & Papageorgiou, K. (2025). Sensemaking with AI: How trust influences human-AI collaboration in the workplace. *Social Sciences & Humanities Open*, 11, 101346. <https://doi.org/10.1016/j.ssaho.2025.101346>

- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Emon, M. M. H. (2025). Digital transformation in emerging markets: Leveraging AI on social media & digital platforms to enhance English language teaching and learning. *Telematics and Informatics Reports*, 20, 100267.
- Enshassi, M., Nathan, R. J., Soekmawati, & Ismail, H. (2025). Unveiling barriers and drivers of AI adoption for digital marketing in Malaysian SMEs. *Journal of Open Innovation: Technology, Market, and Complexity*, 11, 100519. <https://doi.org/10.1016/j.joitmc.2025.100519>
- Faridatul, F., & Purwanto, M. B. (2025). Pemanfaatan Artificial Intelligence (AI) dalam pemasaran digital: Tantangan dan peluang. *OPTIMAL: Jurnal Ekonomi dan Manajemen*, 5(3), 607–622. <https://doi.org/10.55606/optimal.v5i3.7502>
- Faruk, M., Islam, M. S., Mondal, D., Hossain, M. N., Tuhin, M. R., Khatun, M. E., & Ejarder, S. (2026). How artificial intelligence brought a paradigm shift in the digital marketing landscape: A scientometric mapping and future research directions. *International Review of Management and Marketing*, 16(1), 446–460.
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2012). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, 16(1), 15–31.
- Haleem, A., Javaid, M., Qadri, M. A., Singh, R. P., & Suman, R. (2022). Artificial intelligence applications for marketing: A literature-based study. *International Journal of Intelligent Networks*, 3, 119–132. <https://doi.org/10.1016/j.ijin.2022.08.005>
- Kulkarni, A. V., Joseph, S., & Patil, K. P. (2024). Artificial intelligence technology readiness for social sustainability and business ethics: Evidence from MSMEs. *International Journal of Information Management Data Insights*, 4, 100250.
- Kurniawan, F., Machmud, M. T., Sudirman, S., Anifah, A., Bangun, M. B., Ndaraha, E. D., & Hasanah, F. (2024). The Artificial Intelligence (AI) utilizing to assist digital marketing in Indonesia: A systematic literature review during 2019–2024. *Proceedings of EAI*, 1–12.
- Liliana, D. Y., Nalawati, R. E., Marcheta, N., & Huzaifa, M. (2025). Pemanfaatan artificial intelligence dalam digital marketing: Transformasi UMKM di Kota Depok. *INNOVATIVE: Journal of Social Science Research*, 5(2), 2169–2180.
- Masnita, Y., et al. (2024). Artificial intelligence in marketing: Literature review and future research agenda. *Journal of System and Management Sciences*, 14(1), 120–140.
- Mota, F. L. G., Ferreira, N. C. M. Q. F., Dabić, M., Ferreira, F. A. F., & Santos, M. R. (2026). Mapping cognitive influences on artificial intelligence adoption. *Technological Forecasting and Social Change*, 224, 124490.
- Mustofa, R. H., Kuncoro, T. G., Atmono, D., Hermawan, H. D., & Sukirman. (2025). Extending the technology acceptance model: The role of subjective norms, ethics, and trust in AI tool adoption among students. *Computers and Education: Artificial Intelligence*, 8, 100379.
- Nguyen, T. H., Le, X. C., & Vu, T. H. L. (2022). An extended Technology-Organization-Environment (TOE) framework for online retailing utilization in digital transformation: Empirical evidence from Vietnam. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(4), 200. <https://doi.org/10.3390/joitmc8040200>
- Santosa, A. D., & Surgawati, I. (2024). Artificial Intelligence (AI) adoption as marketing tools among micro, small, and medium enterprises (MSMEs) in Indonesia. *Jurnal Sosial Humaniora*, 17(1).
- Santoso, F., & Artha, B. (2025). Brand flexibility in fashion: A literature review. *Indonesia Economic Journal*, 1(2), 1793–1800. <https://doi.org/10.63822/70rtev67>

- Sidi, A. P., Citaningtyas, D., Kadi, A., & Santoso, R. (2024). Pelaku UMKM industri kreatif di Jawa Timur sadar pentingnya inovasi dalam menghadapi disrupsi teknologi. *RELASI: Jurnal Ekonomi*, 20(1), 128–140.
- Suarantalla, R. (2025). Peran Artificial Intelligence (AI) dalam optimalisasi pemasaran digital pada Usaha Mikro, Kecil, dan Menengah (UMKM). *Journal of Artificial Intelligence and Digital Business (RIGGS)*, 4(3), 8480–8491. <https://doi.org/10.31004/riggs.v4i3.3277>
- Uddin, B., Sulistyohati, A., Janah, N. R., Sudrajat, J., & Khaira, A. (2025). Inovasi pemasaran UMKM dengan teknologi Artificial Intelligence (AI) pada UMKM Desa Warnasari, Kabupaten Bandung. *Jurnal Pengabdian Masyarakat*, 7(2), 1353–1358.
- ul Haq, F., & Suki, N. M. (2025). AI-driven innovation in emerging markets: Extending the technology acceptance model-technology-organization-environment framework in small- and medium-sized enterprises. *Data Science and Management*, 8(4), 485–499. <https://doi.org/10.1016/j.dsm.2025.04.001>