

Artificial Intelligence Legal Setting Model in MSME Business Activities in Indonesia

Lukmanul Hakim^{1*}, Faisal², Raga Saputra³, Arya⁴, Benjamin⁵

¹E-mail: lukmanul.hakim@ubl.ac.id

²E-mail: faishalsal09@gmail.com

³E-mail: kbangsa95@gmail.com

⁴E-mail: abangbeni29@gmail.com

^{1,2,3,4,5}Universitas Bandar Lampung, Indonesia

*corresponding author

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Abstract

The development of Artificial Intelligence (AI) has driven the transformation of Micro, Small, and Medium Enterprises (MSMEs) business activities in Indonesia through increased operational efficiency, data-driven decision-making, digital marketing, and expanded market access. However, the use of AI also raises various legal problems, including the lack of comprehensive regulations regarding the use of AI in business activities, the unclear division of legal responsibilities between business actors, AI technology providers, and digital platform operators, the risk of personal data protection violations, unfair business competition practices, and weak protection for MSME actors and consumers. This condition shows that there is a legal gap in the Indonesian business legal system that has the potential to cause legal uncertainty. This study aims to analyze the implementation of business law regulations on the use of AI in MSME business activities, examine the legal responsibility of the parties for losses arising from the use of AI, and formulate a business law regulatory model that is able to accommodate the use of AI in a safe, fair, and accountable manner. The research uses normative legal research methods with a statute approach, a conceptual approach, and a comparative approach. The legal materials used consist of primary, secondary, and tertiary legal materials that are analyzed qualitatively using prescriptive methods. The results of the study show that the legal regulation regarding AI in MSME business activities in Indonesia is still sectoral and has not provided adequate legal certainty related to AI governance, division of legal responsibilities, algorithm transparency, AI system audits, and data and consumer protection. This condition results in not optimal legal protection for MSME actors in utilizing AI. This research offers a risk-based regulatory model of business law that integrates the principles of legal certainty, fairness, accountability, transparency, data security, consumer protection, healthy business competition, and technological innovation. The proposed model consists of six main pillars, namely risk-based regulation, the implementation of good AI governance, proportional division of legal responsibilities, the obligation of AI Impact Assessment and algorithm audits, strengthening personal data protection and cybersecurity, and proportionate regulation for MSMEs. The model is expected to be able to be the basis for the formation of AI regulations in Indonesia that support the creation of a safe, fair, and sustainable digital business ecosystem.

INTRODUCTION

The development of digital technology has brought significant changes to business activity patterns in various economic sectors, including micro, small, and medium enterprises (MSMEs). One of the rapidly growing technological innovations is *Artificial Intelligence* (AI), which has changed the way business actors carry out business activities, ranging from digital marketing, consumer behavior analysis, inventory management, chatbot-based customer service, administrative automation, to data-based business decision-making. The use of AI provides a great opportunity for MSMEs to improve operational efficiency, productivity, innovation, and competitiveness, both at the national and global levels.¹

In Indonesia, MSMEs have a strategic role as the backbone of the national economy. Their contribution to gross domestic product (GDP), labor absorption, and equitable development make this sector one of the priorities for economic development. The digital transformation that continues to be encouraged by the government is increasingly expanding MSMEs' access to information technology, including the use of AI in various business activities. However, the development of technology has not been fully followed by the formation of regulations that are able to provide legal certainty for business actors.

The use of AI in MSME business activities not only brings economic benefits, but also raises various legal issues. The use of AI in consumer data management raises the issue of personal data protection, cybersecurity, and legal responsibility for data misuse. On the other hand, the use of AI in the preparation of business contracts, pricing, product recommendations, and automated decision-making has the potential to raise issues regarding the legitimacy of electronic transactions, algorithm transparency, digital discrimination, abuse of dominant positions by digital platforms, and legal liability if AI systems produce losses for business actors and consumers.

These problems show that business law faces new challenges in accommodating the development of AI. The current legal framework, such as provisions on electronic transactions, personal data protection, consumer protection, business competition, and intellectual property rights, has basically not been specifically designed to regulate the use of AI in business activities. As a result, there is still a legal *gap* and unclear regulation regarding the limits of liability of business actors, AI technology providers, and digital platform operators when losses caused by AI systems occur.²

¹ Abdad, (2024), Legal Analysis on remixing songs using artificial intelligence technology, Journal Law and Justice, Vol 9 No. 1. Hlm 3

² Mutaqin, (2023), The Implementation of AI in Life, First Printing, Yayasan Kita Menulis, Medan.

From a business law perspective, this condition has implications for the application of the principles of legal certainty, justice, balance, and legal protection in legal relations involving AI. In fact, legal certainty is one of the main prerequisites for the creation of a healthy and conducive business climate. Without clear regulations, MSME actors have the potential to face greater legal risks, both in contractual relationships, electronic transactions, data protection, and dispute resolution arising from the use of AI.

At the global level, various countries have begun to develop AI regulations through a *risk-based regulation* approach, *responsible AI governance*, and ethical AI principles. These regulations not only aim to encourage technological innovation, but also ensure the protection of the rights of business actors and consumers. These developments are an important reference for Indonesia in formulating AI regulatory models that are in accordance with the characteristics of the national legal system and the needs of the business world, especially MSMEs.³

The urgency of this research is getting stronger considering that until now Indonesia has not had a comprehensive regulation on the use of AI in business activities. Existing regulations are still sectoral so that they have not been able to answer the complexity of legal relations born from the use of AI in business activities. This condition raises the need for a regulatory model that is able to integrate the principles of legal certainty, justice, accountability, transparency, data security, consumer protection, healthy business competition, and encourage technological innovation in a sustainable manner.

The formulation of the problem in this study is as follows: How is the implementation of business law regulations on the use of *Artificial Intelligence* in MSME business activities?; What are the legal responsibilities of business actors, AI technology providers, and digital platform operators for losses arising from the use of AI in MSME business activities?; and How is the business law regulatory model that is able to accommodate the safe, fair, and accountable use of AI for MSMEs in Indonesia?

Based on this description, this study is important to examine how the legal regulation of the use of *Artificial Intelligence* in MSME business activities in Indonesia, identify various gaps and weaknesses in existing regulations, and formulate a legal regulatory model that is adaptive to the development of digital technology. The model is expected to be able to provide legal certainty for MSME actors, create a fair and safe digital business ecosystem, while supporting the transformation of the national economy towards a sustainable digital economy.

³ Presuel, R., & Sierra, J. (2023). The Adoption of Artificial Intelligence in Bureaucratic Decision-making: A Weberian Perspective. *Digital Government: Research and Practice*, 5, 1 - 20. <https://doi.org/10.1145/3609861>.

METHODS

This study employs a normative juridical research design to examine the adequacy of Indonesia's existing legal framework governing the use of artificial intelligence (AI) in Micro, Small, and Medium Enterprise (MSME) business activities and to formulate an AI legal setting model that is proportionate to MSME characteristics. The research uses statutory, conceptual, comparative, and policy-oriented approaches by analyzing primary legal materials, including legislation and government policies concerning MSMEs, electronic transactions, personal data protection, consumer protection, intellectual property, and AI governance, complemented by secondary legal materials consisting of peer-reviewed journal articles, books, and authoritative institutional reports. The collected materials are analyzed qualitatively through regulatory gap analysis, systematic legal interpretation, and comparative analysis of international AI governance frameworks, particularly risk-based and human-centred approaches. The analysis focuses on five dimensions: AI governance and institutional responsibility, transparency and human oversight, personal data and consumer protection, intellectual property, and legal liability and risk allocation. The findings are then synthesized into a proposed MSME-oriented AI Legal Setting Model based on proportionality and risk classification, distinguishing low-, medium-, and high-risk AI applications and linking each risk category to appropriate regulatory obligations, human oversight, accountability mechanisms, and legal remedies. This analytical process is designed to produce a practical and legally coherent framework that balances technological innovation, legal certainty, consumer protection, and the capacity of Indonesian MSMEs.

RESULTS AND DISCUSSION

1. Implementation of business law regulations on the use of Artificial Intelligence in MSME business activities

The development of *Artificial Intelligence* (AI) has brought fundamental changes to modern business practices, including in the micro, small, and medium enterprises (MSMEs) sector. The use of AI is no longer limited to large-scale companies, but has become part of MSME business activities through various applications, such as algorithm-based digital marketing, customer service *chatbots*, consumer behavior analysis, product recommendation systems, inventory management, financial report preparation, and business process automation. The presence of AI provides opportunities for MSMEs to improve operational efficiency, reduce production costs, expand market access, and increase competitiveness amid the rapid development of the digital economy.

However, the implementation of AI in MSME business activities also has increasingly complex legal consequences. The use of AI involves various legal relationships between MSME actors, AI technology providers, digital platform operators, consumers, and other third parties. These relationships give birth to legal rights and obligations that must be protected through business legal instruments that are able to provide certainty, justice, and benefits for all parties.

From the perspective of Indonesian business law, the use of AI has not been comprehensively regulated through a special law. Existing regulations are still spread across various laws and regulations, such as provisions on electronic transactions, personal data protection, consumer protection, business competition, intellectual property rights, and regulations on business licensing. As a result, the legal implementation of the use of AI is still sectoral so that it has not been able to accommodate all legal problems that arise due to the development of this technology.⁴

From the legal aspect of contracts, the use of AI in MSME business activities is mostly realized through electronic contracts between business actors and digital service providers and consumers. AI has even begun to be used in the preparation of contract clauses, business risk analysis, and automated negotiation processes. However, the use of AI does not eliminate the basic principles of treaty law, such as freedom of contract, good faith, balance of the parties, and legal certainty. Problems arise when AI produces decisions that are detrimental to one of the parties or drafts standard clauses that put MSMEs in an unbalanced position. This condition shows the importance of supervising the use of AI to remain in line with the principles of contractual justice.

From a consumer protection perspective, AI is used to collect, process, and analyze consumer data to produce more effective product recommendations and marketing strategies. Although this technology improves the quality of services, the use of AI also has the potential to cause violations of consumer rights in the event of misuse of personal data, improper delivery of information, manipulation of consumer preferences through algorithms, or automated decisions that are discriminatory in nature. Therefore, the implementation of business laws must be able to ensure that the use of AI still respects consumer rights and meets the principles of transparency, accountability, and data security.

In terms of business competition, the use of AI provides competitive advantages for business actors who have access to large amounts of technology and data. However, these

⁴ Situmeang, S., Mahdi, U., Zulkarnain, P., Aziz, H., & Nugroho, T. (2024). The Role of Artificial Intelligence in Criminal Justice. *Global International Journal of Innovative Research*. <https://doi.org/10.59613/global.v2i8.296>.

conditions can create inequality between MSMEs and large companies and digital platform operators. AI algorithms can be used to control prices, determine product search priorities, or provide different treatment to certain business actors. This kind of practice has the potential to reduce healthy business competition and weaken the bargaining position of MSMEs. Therefore, the implementation of business law must be able to ensure that the use of AI does not become an instrument that creates abuse of dominant positions or unfair business competition practices.

Another very important issue is legal liability for losses arising from the use of AI. In practice, losses can be caused by algorithm errors, system failures, inaccurate automated decisions, or data leaks. Until now, there is no regulation that explicitly determines who should be responsible if AI causes losses in MSME business activities, whether business actors are AI users, technology developers, AI service providers, or digital platform operators. The lack of regulation regarding legal responsibilities has the potential to cause legal uncertainty in dispute resolution.

In addition, the implementation of AI in MSME business activities is also closely related to the protection of intellectual property rights. AI can produce product designs, promotional materials, visual works, and marketing content that have economic value. However, the ownership status of the results produced by AI is still a debate in intellectual property law because the legal system in general still places humans as the main subject of the creation of intellectual works. This condition requires regulatory reform so that innovations generated through AI continue to receive legal protection without ignoring the basic principles of intellectual property rights.⁵

Thus, the implementation of business law regulations on the use of AI in MSME business activities still faces various challenges, both in terms of legal substance, institutional structure, and community legal culture. Regulations that are still partial have not yet realized legal certainty regarding standards for the use of AI, supervisory mechanisms, legal accountability, data protection, and protection of MSME actors as technology users. Therefore, a comprehensive, adaptive, and *risk-based regulatory model is needed*, which integrates the principles of legal certainty, justice, accountability, transparency, consumer protection, data security, healthy business competition, and technological innovation. The regulatory model is expected to be able to create a safe, fair, and sustainable digital business ecosystem, so that the use of AI is truly an instrument to

⁵ Abdul Atsar. 2018. *Getting to Know Intellectual Property Law Closely*. Deepublish: Yogyakarta. Page 34

strengthen the competitiveness of MSMEs while supporting national economic development.⁶

2. Legal responsibility of business actors, AI technology providers, and digital platform operators for losses arising from the use of AI in MSME business activities

The use of *Artificial Intelligence* (AI) in MSME business activities has created more complex legal relationships than conventional business transactions. In practice, the use of AI involves at least three main legal subjects, namely MSME actors as technology users (*AI deployers*), providers or developers of AI technology (*AI developers/providers*), and digital platform operators who become the medium for business transactions. The involvement of these various parties causes the issue of legal accountability to become more complicated when losses due to the use of AI occur. The main problem that arises is who should be responsible if the losses are caused by algorithm errors, system failures, artificial intelligence bias, data leaks, and *automated decision-making* generated by AI.

From a business law perspective, legal liability is a consequence of the exercise of the rights and obligations of the parties in a legal relationship. Every legal subject who derives economic benefits from a business activity in principle also bears responsibility for the risks arising from the activity. However, the character of AI that is able to learn independently (*machine learning*) and produce decisions based on large amounts of data analysis poses new problems, because losses cannot always be directly attributed to human error. As a result, the concept of *fault liability* is not always adequate to resolve disputes arising from the use of AI.⁷

MSME actors as AI users have a responsibility to ensure that the technology used meets the applicable legal provisions and does not cause losses to consumers and business partners. These responsibilities include the obligation to use AI reasonably, provide correct information to consumers, maintain the security of managed data, and supervise the results of decisions produced by AI systems. The use of AI does not remove the responsibility of business actors because business decisions made through AI remain part of business activities under the control of business actors. Thus, if AI is used to provide misleading information, discriminate against consumers, or produce decisions

⁶ Rajasekar, K., & Vezhaventhan, D. (2024). Artificial Intelligence Revolutionizing Legal and Forensic Practices: A Comprehensive Analysis. 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), 1-12. <https://doi.org/10.1109/ICCCNT61001.2024.10724685>.

⁷ Situmeang, S., Mahdi, U., Zulkarnain, P., Aziz, H., & Nugroho, T. (2024). The Role of Artificial Intelligence in Criminal Justice. Global International Journal of Innovative Research. <https://doi.org/10.59613/global.v2i8.296>.

that are detrimental to other parties due to negligence in supervision, MSME actors can still be held legally liable.

On the other hand, AI technology providers or developers have responsibility for the quality, security, and reliability of the developed system. AI providers are obliged to ensure that the algorithms used have gone through an adequate testing process, do not contain design *defects*, do not pose high cybersecurity risks, and have a level of accountability that can be accounted for. In addition, AI providers must also provide clear information about how the system works, the limits of AI capabilities, potential risks to its use, and mitigation mechanisms in the event of a system failure. If losses arise due to software defects, algorithm weaknesses, or system failures derived from the AI technology itself, then the technology provider should assume legal responsibility based on the principle of *product liability* and contractual responsibility in accordance with the service use agreement.⁸

Digital platform operators also have a strategic position in the AI-based business ecosystem. Digital platforms not only provide electronic transaction facilities, but also use AI to manage product search algorithms, recommendation systems, ad placements, seller reputation assessments, and automated decision-making on user activities. Therefore, platform operators have a responsibility to ensure that the algorithms used do not cause discriminatory practices, market manipulation, abuse of dominant positions, or violations of the rights of MSME actors and consumers. Digital platforms are also obliged to provide complaint mechanisms, dispute resolution, and transparency of algorithm policies that have a direct impact on users' business activities.⁹

The issue of legal liability becomes more complex when losses experienced by MSMEs or consumers are the result of an interaction between the actions of business actors, AI design by technology providers, and algorithms operated by digital platforms. In such conditions, the application of single responsibility becomes inadequate because losses can be caused by contributions from several parties at the same time. Therefore, a *proportional liability* approach or shared liability is needed, with the division of responsibility based on the level of error, the level of control over the AI system, and the

⁸ Talukder, K., & Shompa, T. (2024). ARTIFICIAL INTELLIGENCE IN CRIMINAL JUSTICE MANAGEMENT: A SYSTEMATIC LITERATURE REVIEW. Non human journal. <https://doi.org/10.70008/jmldeds.v1i01.42>.

⁹ Bernard Marr and Matt Ward. 2021. *Artificial Intelligence in Practice: How 50 Successful Companies Used Artificial Intelligence to Solve Problems*, (translation by Irene Christin). Kompentendo Media: Jakarta.

causal relationship between the actions of each party and the losses that occur. This approach is more reflective of the characteristics of a collaborative digital ecosystem.¹⁰

In addition to the issue of contractual relationships, the use of AI also has the potential to give rise to liability based on unlawful acts in the event of violations of other parties' rights, such as personal data leakage, intellectual property rights violations, algorithmic discrimination, or the dissemination of misleading information. In this context, any party that neglects to fulfill its legal obligations can be held accountable as long as it can be proven that there is an unlawful act, loss, causal relationship, and error in accordance with the general principles of Indonesian civil law. However, proving the causal relationship in the case of AI often faces obstacles because the AI decision-making process is complex, adaptive, and not fully transparent (*black box algorithm*).¹¹

From the perspective of modern business law, the development of AI shows the need to update the concept of legal liability that not only relies on the principle of error, but also adopts a *risk-based approach*. In this approach, the parties that derive the greatest economic benefits and have the greatest ability to control the risks of using AI are burdened with broader legal obligations to prevent, supervise, and recover in the event of losses. This approach also encourages the implementation of *responsible AI governance*, including transparency, accountability, *human oversight*, system security, personal data protection, and audit mechanisms for algorithms used in business activities.¹²

Thus, the regulation of legal responsibility in the use of AI in MSME business activities requires a more comprehensive formulation than conventional business law regulations. The ideal regulatory model must be able to regulate the proportional division of responsibilities between business actors, AI technology providers, and digital platform operators based on the level of control over the AI system, the source of error, and the economic benefits obtained. In addition, regulations need to establish security standards, algorithm transparency obligations, AI audits, *AI impact assessment* obligations, dispute resolution mechanisms, and effective administrative and civil sanctions. With this regulatory model, the use of AI in MSME business activities not only encourages innovation and digital economic growth, but also ensures legal certainty, protection of business actors and consumers, and the creation of a fair, accountable, and sustainable digital business ecosystem.

¹⁰ Ardiansyah Salim. (2021). *Bureaucracy 4.0: The Application of Artificial Intelligence*. Depok: Rajawali Press. Page 32

¹¹ Mikhail Batin and Alexey Turchin, (2017), Artificial Intelligence in Life Extension: From Deep Learning to Superintelligence, *Journal Informatica*.

¹² Eka Nanda Ravizki and Lintang Yudhantaka, (2022), *Artificial Intelligence As a Legal Subject: A Conceptual Review and Regulatory Challenges in Indonesia*, *Journal Notaire*, vol 5 no. 3 p. 352

3. A business law regulatory model that is able to accommodate the safe, fair, and accountable use of AI for MSMEs in Indonesia

The development of *Artificial Intelligence* (AI) has changed the paradigm of business activities from conventional systems to a *data-driven economy*. For micro, small, and medium enterprises (MSMEs), AI provides opportunities to improve operational efficiency, expand market access, improve business decision-making, and increase competitiveness through the automation of various business processes. However, behind these benefits there are various legal risks, such as data misuse, algorithmic discrimination, unclear legal liability, intellectual property rights violations, and unfair business competition practices. Therefore, a business law regulatory model is needed that not only encourages technological innovation, but is also able to provide legal certainty, legal protection, and balance of interests for all actors in the digital business ecosystem.

The current regulation of AI law in Indonesia is still sectoral and spread across various laws and regulations, such as regulations regarding electronic transactions, personal data protection, consumer protection, business competition, intellectual property rights, and the development of MSMEs. This condition causes the absence of legal standards that specifically regulate the use of AI in business activities. As a result, MSME actors face legal uncertainty regarding the limits of AI use, the responsibilities of the parties, system security standards, and dispute resolution mechanisms in the event of losses due to the use of AI. Therefore, it is necessary to establish a regulatory model that is comprehensive, adaptive, and able to keep up with very rapid technological developments.

An ideal business legal regulatory model needs to be built on a *risk-based approach*. This approach places the level of oversight and legal obligations according to the level of risk posed by the use of AI. AI that is only used for administrative functions, such as stock management or financial reporting, may be subject to simpler requirements. In contrast, AI used in decision-making that impacts the rights of businesses or consumers, such as credit, pricing, product rating, or personal data processing, must be subject to stricter supervisory standards. A risk-based approach allows regulation to still make room for innovation without neglecting legal protections.

In addition to a risk-based approach, the regulatory model must also adopt the principles of good AI governance as the foundation of AI governance in business activities. These principles include legal certainty, transparency, accountability, justice, security, personal data protection, and human *oversight*. Transparency requires AI providers and digital platform operators to adequately explain how AI systems work, the purpose of their use, and the potential risks that can be caused. Accountability requires that there be parties who can be held accountable for every AI decision that causes losses.

Meanwhile, human oversight is needed so that strategic decisions that have a significant impact on the rights of business actors and consumers are not completely left to the AI system.¹³

From a business law perspective, AI regulations must also provide certainty regarding the division of legal responsibilities between MSME actors as AI users, AI technology providers, and digital platform operators. The regulatory model can no longer use the concept of single liability, but must apply *proportional liability* based on the level of control over the AI system, the source of error, and the causal relationship with the losses that occur. MSME actors are responsible for the use of AI in their business activities, AI providers are responsible for the security and reliability of the technology developed, while digital platform operators are responsible for the governance of algorithms and the security of the digital ecosystem they provide. This division of responsibility will provide legal certainty while encouraging each party to apply the principle of prudence.

The ideal regulatory model also needs to require an AI Impact Assessment (AIIA) before AI is applied in high-risk business activities. Through this mechanism, business actors and technology providers identify potential legal, economic, social, cybersecurity, personal data protection, and consumer rights impacts before AI systems are widely used. The results of these assessments serve as a basis for regulators to determine whether an AI system is feasible to use, requires additional oversight, or needs to be improved first. This approach is preventive so that it can minimize potential disputes and losses.

Furthermore, regulations need to regulate the obligation to audit algorithms (*algorithm audits*) periodically for AI systems used in business activities. Audits aim to ensure that algorithms do not contain bias, do not produce discriminatory decisions, and meet security standards and compliance with laws and regulations. Audits also function as a supervisory instrument for digital platform operators who use algorithms to determine product visibility, recommendation systems, and pricing. With algorithm audits, MSME actors get assurance that AI systems are not used to create unfair business competition or abuse of dominant positions.¹⁴

Another aspect that must be part of the regulatory model is the strengthening of personal data protection and cybersecurity. AI works based on the collection and processing of large amounts of data so that regulations must strictly regulate the legal basis for data processing, consent of data owners, restrictions on data use, data storage,

¹³ Stuart J Russel, (2016), *Artificial Intelligence : A Modern Approuch*, Third Edition, New Jersey : Pearson Education. Hlm 23

¹⁴ Ravizki Op. Cit

and the obligation to implement information security standards. This protection not only protects consumers, but also protects MSME business data that has high economic value. Thus, trust in the use of AI in business activities can continue to be maintained.

In order to support the sustainability of MSMEs, regulations also need to provide proportionate treatment through the application of the principle of proportional regulation. MSMEs should not be burdened with the same administrative obligations as large-scale technology companies. Therefore, the government needs to provide compliance schemes that are tailored to the capacity of MSMEs, such as simplifying compliance procedures, providing guidelines for the use of safe AI, AI certification facilities, incentives for business actors who implement AI governance responsibly, and programs to improve digital literacy and legal literacy. This approach will encourage innovation without hindering the growth of MSMEs.

From an institutional perspective, it is necessary to establish an inter-agency coordination mechanism involving the government, digital sector supervisory authorities, consumer protection agencies, competition authorities, academics, business associations, and AI technology providers. This institutional synergy is needed to develop technical standards, conduct supervision, resolve disputes, and evaluate the development of AI technology on a regular basis. Given that the development of AI is happening very quickly, the regulatory model must be adaptive so that it can accommodate new innovations without always having to make changes to the law.

Thus, a business legal regulatory model that is able to accommodate the safe, fair, and accountable use of AI for MSMEs in Indonesia must be built through a comprehensive approach by integrating the principles of legal certainty, fairness, usefulness, transparency, accountability, security, and innovation. The regulatory model includes at least six main pillars, namely: **(1) risk-based regulatory approach; (2) application of good AI governance principles; (3) proportionate distribution of legal responsibilities; (4) AI Impact Assessment and algorithm audit obligations; (5) strengthening personal data protection and cybersecurity; and (6) proportionate regulation for MSMEs through government support and institutional coordination.* This model is expected to be able to create a business legal ecosystem that is adaptive to technological developments, provide legal certainty for MSME actors, protect consumer interests, and encourage the use of AI as an instrument to increase national economic competitiveness in a sustainable manner.

CONCLUSION

The development of *Artificial Intelligence (AI)* has brought significant changes to the business activities of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia. The

use of AI provides various benefits, including increasing operational efficiency, expanding market access, strengthening digital marketing strategies, improving the quality of data-based decision-making, and encouraging the competitiveness of MSMEs in the digital economy era. However, the use of AI also raises various legal issues, such as personal data protection, legal liability for losses caused by AI systems, consumer protection, intellectual property rights, cybersecurity, and the potential for algorithmic discrimination.

The current legal regulations do not comprehensively regulate the use of AI in MSME business activities. Existing regulations are still sectoral and spread across various laws and regulations, such as the Electronic Information and Transaction Law, the Personal Data Protection Law, the Consumer Protection Law, as well as various regulations regarding MSMEs and electronic commerce. This condition causes the lack of legal certainty regarding the rights, obligations, and responsibilities of the parties involved in the use of AI.

The AI legal regulatory model in MSME business activities in Indonesia needs to be built through an adaptive, *risk-based regulatory* approach, and oriented towards the principles of legal certainty, justice, usefulness, transparency, accountability, security, and human rights protection. The model must clearly regulate the classification of AI risk levels, the obligations of AI technology providers, the responsibilities of MSME business actors as AI users, government supervision mechanisms, personal data protection, consumer protection, dispute resolution, and providing incentives for the development of responsible AI innovation. Thus, AI regulations not only provide legal protection for all parties, but are also able to encourage the digital transformation of MSMEs towards an inclusive, competitive, and sustainable digital economy ecosystem.

The suggestion in this case is that the Government needs to immediately prepare a special regulation on Artificial Intelligence that provides legal certainty for the use of AI in various sectors, including MSME business activities. The regulation should be comprehensively prepared by integrating aspects of personal data protection, cybersecurity, consumer protection, legal responsibility, AI ethics, and effective supervision mechanisms.

In addition, harmonization between AI regulations and various laws and regulations that have been in force is needed so that there is no overlap of norms and legal vacancies. This harmonization is important to create a legal system that is consistent and able to keep up with the development of very dynamic digital technology.

The government also needs to increase the capacity of MSMEs through digital literacy programs, AI literacy, and legal assistance so that MSME actors are able to utilize AI

technology safely, responsibly, and in accordance with legal provisions. On the other hand, AI technology providers must be required to apply *ethical AI* principles, algorithm transparency, system security, and accountability in every service provided to business actors.

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