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The Regulation of Artificial Intelligence in Indonesia's Constitutional Law System: The Need for Regulatory Reform

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Abstract

The development of Artificial Intelligence/AI has driven significant transformations in various sectors of state life, including governance, public services, and law enforcement. However, the increasingly widespread use of AI in Indonesia has not been matched by a comprehensive regulatory framework that is integrated into the constitutional legal system. The absence of adequate regulations has the potential to raise constitutional issues, particularly those related to the protection of human rights, the principle of the rule of law, accountability of power, and legal certainty. This study aims to analyze AI regulations in the Indonesian constitutional law system and examine the urgency of AI regulatory reform from a constitutional law perspective. The research method used is a literature review by examining laws and regulations, policy documents, and national and international journal articles relevant to the issue of AI regulation and governance. The results of the study show that AI regulation in Indonesia is still sectoral, fragmented, and lacks a clear constitutional basis. This condition has implications for the weak protection of citizens' rights and the suboptimal oversight mechanisms for AI use. Therefore, this is very important for the development and utilization of AI in line with democratic values and the objectives of Indonesia as a constitutional state.

Keywords: Artificial Intelligence; Constitutional Law; Regulatory Reform; Human Rights

INTRODUCTION

The development of artificial intelligence (AI) over the past two decades has brought fundamental changes to various sectors of national life, including law, government, and the judicial system. AI is not only being utilized to improve the efficiency of administration and public services, but is also beginning to be used in legal decision-making, regulatory development, and digital-based dispute resolution (Ermakova & Frolova, 2021; Abedi et al., 2025). This transformation makes AI a strategic technology with direct implications for the fundamental principles of the rule of law, democracy, and the protection of human rights.

The use and creation of AI in different nations have triggered the establishment of new laws and regulations to regulate the threats of technologies and protect innovation. Various countries (such as the European Union, the United States, and some Asian nations) have started developing legal strategies that can put AI in the context of ethics and accountability as well as the defense of the constitutional rights of citizens (Alfiani and Santiago, 2024; Cajueiro and Celestino, 2025). Nevertheless, due to the dissimilarity of the legal traditions and institutional capabilities, every country has its own issues with establishing effective and context-specific AI regulations.

To penetrate the Indonesian context, the application of AI has already started to take root in such areas of strategic use as civil justice, land dispute resolution, public administration, and even legal profession (Fitri and Kurniawan, 2025; Maskanah, 2025). Nonetheless, regulation of AI in the national legal system still is sectoral and divided into a number of technical policy areas, lacking a normative basis under the constitutional law system. Such a scenario may potentially provoke a constitutional challenge especially the assurances of legal

certainty, restraints on the power of states, security of personal data, and the satisfaction of constitutional rights of the citizens (Coan & Surden, 2025; Marsch, 2019).

There is also a lack of detailed regulations of AI, which creates some problems regarding the separation of powers and the appropriateness of using algorithms to make decisions. AI can change the position of state structures in lawmaking, policing, and the services provided to the citizens, putting the latter at a risk of unregulated accumulation of power unless the process is strictly controlled (Bar-Siman-Tov, 2025; Michaels, 2019). As in more developing countries such as Indonesia, the issues have become more complicated by the lack of institutional competence and the necessity to reconcile the technological innovation with the protection of human rights.

As many studies have demonstrated, legal reform is an important pre-condition to react to the emergence of AI, especially to make sure that the application of AI does not contradict the spirit of the rule of law and constitutional principles. According to one of such studies, Druzin et al. (2025) reports that legal reform is required to combat the use of AI to stop misuse. This has also been affirmed by a research conducted by Nugroho (2025), which opines that the fast building of the Artificial Intelligence (AI) technology brings with it the need to ensure that limits or laws are put in place to regulate AI. There are however few studies to date which specifically situate AI regulation in the context of the constitutional legal system of Indonesia. The majority of studies concentrate on technical, ethical or sectoral issues, but they fail to combine them with the principles of the constitutional law and the constitutional institution design.

Thus, it is in this context that this research study is essential in fully analyzing in which the regulation of AI ought to be placed in the Indonesian constitutional legal framework. It tries to examine the urgency of AI regulatory reform by highlighting the necessity of a constitutively grounded legal system, with a focus on safeguarding human rights, and accountability and transparency in the application of AI technology. This research is expected to provide theoretical contributions to the development of constitutional law studies and become a normative reference in the formulation of AI policies and regulations in Indonesia.

METHODS

This research employs a normative legal research approach with a literature review method. This approach was chosen because the research aims to analyze the regulation of Artificial Intelligence/AI within Indonesia's constitutional legal system and examine the urgency of AI regulatory reform based on constitutional law principles. The focus of the research is not on empirical data collection, but rather on examining relevant legal norms, doctrines, and academic thought.

The research data sources consist of primary and secondary legal materials. The basic legal resources are the 1945 Constitution of the Republic of Indonesia, the laws and regulations concerning the application of digital technology and AI, and the national policy documents. In the meantime, secondary legal resources comprise national and international journal articles, legal textbooks, scientific proceedings, and academic reports covering the subject of AI regulation, constitutional law, and technology regulation. The journal publications included in this study were found as a result of the systematic search of such scientific databases as Scopus, Google Scholar, or national journals portals and published within the past five years to guarantee both relevance and the novelty of the study.

The literature review was based on the use of such keywords as artificial intelligence regulation, constitutional law, AI governance, and legal reform. The data was analyzed in terms of normative qualitative analysis approach, the meaning of the legal norms and the comparison of them with existent concepts, theories, and practices of AI regulation in different countries. A comparative law approach was added to this analysis in order to determine regulatory patterns and best practices that are applicable in the Indonesian setting. Thus, the results of the

analysis are then synthesized to formulate arguments regarding the weaknesses of AI regulations in the Indonesian constitutional legal system and the need for regulatory reforms that are constitutionally based, oriented towards protecting human rights, and guarantee the accountability of the use of AI in state administration.

RESULTS & DISCUSSION

The development of Artificial Intelligence/AI has brought fundamental changes to state governance, power relations, and the protection of citizens' constitutional rights. AI is no longer merely a technological instrument but has become a determining factor in public policymaking, state administrative services, law enforcement, and even population data management. In this context, constitutional law is required to respond adaptively to ensure constitutional principles are maintained amidst technological disruption. This discussion presents the results of a literature review on the regulatory status of AI in the Indonesian constitutional legal framework, reveals regulatory loopholes, and evaluates the necessity of the AI regulatory reform in a constitutional sense. The argument is based on the interplay between AI, constitutional supremacy, protection of human rights, the principles of the rule of law, and the necessity of changing the design of national regulations.

Artificial Intelligence as a New Challenge in Constitutional Law

The emergence of Artificial Intelligence (AI) has formed new complications with the Indonesian constitutional law, especially in the perception of the connection between the state power, technology, and the citizens. Conventional constitutional law is concerned with the rules of state institutional structures, power separation and balancing. Nevertheless, due to the introduction of AI, this range expands, since technology is now actively involved in the process of decision making by people. AI has ceased to be a tool of an administration but rather a component of the power mechanism itself.

This phenomenon requires the constitutional law to identify AI as a novel constitutional consideration that affects the execution of the state functions. Common themes across these standards include the need for tiered transparency levels based on system risk and impact (Lund, 2025). The application of AI in policy making, in delivery of services to people and even the judiciary can move the focus of the decision making process to the computer programs. The case has direct consequences to the values of popular sovereignty and constitutional democracy.

The trends in AI regulation in the world demonstrate that the states are starting to acknowledge the necessity of a more technocratic but normative and constitutional approach to regulate the effects of AI (Shetty et al., 2025). This issue is also complicated in the Indonesian context where there is no constitutionally-based legal framework, which explicitly governs AI. Hence, the constitutional law must adapt flexibly through technology governance being part of constitutional rhetoric.

AI, the Principle of the Rule of Law, and Accountability of Power

The principle of the rule of law (*rechtsstaat*) is one of the main rules of the Indonesian constitutional law that stipulates that all activities of the state administrators should be grounded in law and be responsible. The application of AI in the government and the legal sphere have severe concerns about the responsibility of authority, particularly in cases when the decision is made by complex and opaque algorithms. Rochmawan (2025) points out that the age of algorithms is associated with critical moral legal issues, especially regarding the rules of responsibility and clarity.

Within the constitutional law, this scenario may undermine the constitutional accountability procedures since it is hard to establish who is to be held accountable in the decisions made by AI either the creator of the system, the user or the state institution that adopts it. Moreover, Saputra (2025) states that adopts it. Moreover, Saputra (2025) states that a

normative basis of the problem of AI-related decisions as of legality is yet to be established within the Indonesian judicial system. Such results indicate that in the absence of strong rules, the application of AI may introduce a legal vacuum that may go against the principle of the rule of law. Thus, constitutional law should be involved in creating constitutional restrictions on AI application in order to uphold the accountability of power principle.

Integration of AI in the Legislative Process and Challenges to Constitutional Democracy

Applicability of AI in the legislative process creates possibilities of efficiency, yet also raises significant challenges to constitutional democracy. Priambudi, Papuani, and Iskandar (2021) show that AI application in law drafting, especially when working with omnibus laws, may provide an opportunity to conduct a regulation analysis in a fast and systematic way. Yet, they also highlight the danger of reducing social involvement and democratic debate in case the process is based excessively on algorithm systems. A constitutional interpretation of legislation makes legislation more of a popular sovereignty than a technical process.

In the case of AI utilization mainly without any constitutional control, it is possible that the procedure of lawmaking will become closed and elitist. This does not comply with the tenet of the populace involvement assured by Biasin (2024). The constitution also supports this opinion by stating the need to implement AI into the law in an open and democratic way. They postulate the idea of smart lawmaking that upholds the original human control (Tang, 2025). In such a way, constitutional law must develop constitutional principles that will assure that AI will be used as a helpful instrument rather than as a democratic process.

Integration of AI in the Legislative Process and Challenges to Constitutional Democracy

The use of AI in the legislative process opens up opportunities for efficiency, but also presents serious challenges to the principles of constitutional democracy. Priambudi, Papuani, and Iskandar (2021) show that the use of AI in legislative drafting, particularly in the context of omnibus laws, can facilitate rapid and systematic regulatory analysis. However, they also emphasize the risk of reducing public participation and democratic deliberation if the process relies too heavily on algorithmic systems. From a constitutional law perspective, legislation is not simply a technical process but a manifestation of popular sovereignty. When AI is used predominantly without adequate constitutional oversight, there is a risk that the lawmaking process will become elitist and closed. This contradicts the principle of public participation guaranteed by the constitution.

This view is reinforced by Floridi (2021) who emphasize that some European legislation on artificial intelligence (AI) had been expected at least since 16 July 2019 and importance of participatory and transparent integration of AI into legislation. They propose the concept of smart lawmaking that maintains the primary control of humans. Therefore, constitutional law needs to formulate constitutional principles that ensure that AI functions only as a supporting tool, not a substitute for democratic processes (Floridi, 2021).

AI, Judicial Power, and Protection of Constitutional Rights

The use of AI in the judiciary is a crucial issue in constitutional law because it directly relates to the protection of citizens' constitutional rights. AI has begun to be used for decision analysis, predicting case outcomes, and even for case management in court. While offering efficiency, this use also raises concerns about judicial independence and the principle of due process of law. Susilo (2025) proposed a Pancasila-based normative model for the application of AI to court decisions in Indonesia. This paper claims that AI must not take over the judiciary as a moral and constitutional subject. Within the framework of the constitutional law, the given findings underline the idea that judicial authority should remain in the hands of constitutionally responsible humans, and AI is merely a supporting device.

Additionally, Wijayanto, Handayani, and Karjoko (2024) indicate that there can be a great potential in the use of AI in the Constitutional Court, which contributes to the considerable efficiency, yet should be accompanied by stringent constitutional rules. In the

absence of such regulations, the use of AI would possibly infringe the right to a fair trial and an independent trial. According to these results, the AI regulations should be reformed in terms of the Indonesian constitutional law. This reform should be rooted in the realization that AI presents expansive constitutional consequences to democracy, rule of law as well as safeguarding human rights. Hence, the regulation of AI cannot be realized only in the form of the sectoral regulation but should be included in the overall constitution law. The principles of transparency, accountability, and public participation should be emphasized in AI-based public policy reforms. Within the constitutional law, the principles should be transformed to functioning constitutional norms.

Relevance of Findings for the Development of Indonesian Constitutional Law

The findings in this discussion indicate that the presence of Artificial Intelligence (AI) has significant implications for the direction of development of Indonesian constitutional law. Essentially, AI not only impacts the technical aspects of governance but also challenges fundamental concepts in constitutional law, such as the limitation of power, public accountability, and the protection of citizens' constitutional rights. Therefore, constitutional law is required to broaden its scope of study, no longer limited to state institutional structures, but also encompassing technology governance and state-citizen relations in the digital context. This broadening of scope is crucial because AI has been used in various public decision-making processes, including policy formulation, administrative services, and the judicial system. This situation emphasizes that technology is no longer neutral but has a dimension of power that must be controlled through constitutional mechanisms.

This is reinforced by research by Priambudi et al. (2021), which shows that the use of AI in legislative processes, such as legislative drafting through an omnibus law approach, has the potential to increase efficiency, but also raises issues of democratic legitimacy if not balanced by a clear and accountable legal framework. These findings are relevant in demonstrating that AI must be positioned as an object of constitutional regulation, not simply an administrative tool. Furthermore, the development of AI-based constitutional law is also closely related to issues of cybersecurity and the protection of state systems. This is further reinforced by research by Rohimi (2025), which asserts that AI regulations in Indonesia are still reactive and sectoral, thus failing to comprehensively address digital security challenges. From a constitutional law perspective, this weakness implies potential violations of the rule of law principle, as the state has not provided adequate legal protection against systemic risks posed by AI. Therefore, strengthening the constitutional framework is a prerequisite for developing adaptive and sustainable AI regulations.

Furthermore, the relevance of this research's findings is also evident in the context of ethics and legal responsibility for algorithm-based decisions. Research by Rochmawan (2025) also reinforces the finding that the use of AI in legal processes and state administration raises ethical dilemmas, particularly when decisions are generated by non-transparent algorithmic systems. In the context of constitutional law, this situation has the potential to undermine the principle of accountability of power, as it is difficult to determine who is constitutionally responsible for the impact of AI decisions. This suggests that constitutional law needs to develop a new concept of accountability that accommodates the characteristics of AI technology. This aspect of accountability becomes even more relevant when linked to the judicial system. Furthermore, research by Saputra (2025) also confirms that the use of AI in the Indonesian judicial system raises legal issues related to liability and due process of law. These findings strengthen the argument that constitutional law must play a role in establishing constitutional limits on the use of AI to prevent it from eroding the principle of judicial independence and the right to fair justice (Rohimi, 2025).

Therefore, the relevance of these studies is that including AI as an object of constitutional study in Indonesian constitutional law can lead to progressive development and

responsiveness to the challenges of the times. This approach simultaneously strengthens the constitution's role as a living constitution capable of adapting to social and technological changes. Reformulating constitutional law that is sensitive to developments in AI is a strategic step to ensure that technological innovation remains aligned with democratic values, the rule of law, and the protection of human rights.

CONCLUSION

The development and utilization of artificial intelligence (AI) in various strategic sectors in Indonesia demonstrates the urgency of establishing a regulatory framework that is not merely technical but also based on constitutional legal principles. This study confirms that the regulation of AI in the Indonesian legal system is currently sectoral, fragmented, and not yet systemically integrated within the constitutional legal framework. This situation has the potential to raise constitutional issues, particularly regarding guarantees of human rights protection, legal certainty, accountability of power, and limitations on state authority in the use of algorithm-based technology.

The analysis shows that the absence of comprehensive AI regulations can weaken the oversight function of technology-based decision-making and open up opportunities for abuse of power that are inconsistent with the principles of the rule of law and constitutional democracy. Therefore, AI regulatory reform is an urgent need that must be placed within a constitutional framework, emphasizing the principles of prudence, transparency, accountability, and the protection of citizens' constitutional rights as its primary foundation. With the hope of ensuring that the use of AI not only drives innovation and efficiency, but also remains within the corridor of constitutional values and the objectives of the Indonesian rule of law.

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