

Constitutionality of the Use of Artificial Intelligence in Government Administrative Decision-Making: An Analysis of the Principle of Due Process of Law in Indonesia

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Abstract:

The rapid integration of Artificial Intelligence (AI) into public administration has fundamentally transformed governmental decision-making processes by enhancing efficiency, consistency, and the speed of public service delivery. However, the increasing reliance on algorithmic systems in administrative governance raises significant constitutional concerns, particularly in relation to transparency, accountability, procedural fairness, and the protection of citizens' fundamental rights. This study aims to examine the constitutionality of AI-assisted administrative decision-making in Indonesia through the lens of the principle of due process of law. The research employs a qualitative legal research method with a normative-juridical approach. It focuses on constitutional principles, administrative law doctrines, statutory frameworks, and comparative legal developments concerning automated decision-making in the public sector. Data are collected through an extensive doctrinal analysis of constitutional provisions, legislation, judicial decisions, scholarly literature, and relevant policy documents addressing artificial intelligence and digital governance. The findings indicate that while AI-based systems provide substantial administrative benefits, their implementation introduces constitutional risks such as algorithmic opacity, limited explainability, potential discriminatory outputs, and weakened accountability mechanisms. These issues directly affect the realization of procedural justice, legal certainty, equality before the law, and access to effective legal remedies. The study further identifies that Indonesia's current legal framework has not yet developed comprehensive constitutional safeguards specifically regulating the use of AI in administrative decision-making. As a key contribution, this study proposes a constitutional compliance framework consisting of six interrelated principles: legality, transparency, explainability, human oversight, accountability, and effective remedy. This framework is intended to serve as a normative benchmark for evaluating the constitutional legitimacy of AI deployment in public administration and to ensure that technological advancement remains aligned with the rule of law, democratic governance, and the protection of fundamental rights.

Keywords: Artificial Intelligence; Administrative Decision-Making; Due Process of Law; Constitutional Law; Algorithmic Governance; Indonesia.

1. Introduction

The rapid development of Artificial Intelligence (AI) has transformed the architecture of public governance across the world. Governments increasingly utilize algorithmic systems to support administrative functions ranging from welfare allocation and taxation to immigration control, public health management, and regulatory enforcement. AI-driven decision-making promises significant improvements in efficiency, consistency, and cost reduction within public administration. At the same time, the growing reliance on automated systems has generated profound constitutional concerns regarding transparency, accountability, and the protection of fundamental rights. Public decisions that directly affect legal status, access to public services, and individual entitlements are no longer exclusively produced through human deliberation but are increasingly influenced by algorithmic processes whose internal logic often remains inaccessible to citizens and decision-makers alike (Roehl & Cromptoets, 2023; Veale & Brass, 2019; Wischmeyer & Rademacher, 2020).

The constitutional implications of AI-assisted administrative decision-making have become particularly significant in democratic states governed by the rule of law. Due process of law requires that governmental decisions affecting citizens' rights be conducted through fair procedures, transparent reasoning, and accessible mechanisms of review. Algorithmic decision systems challenge these procedural guarantees because many AI models operate through complex computational structures that limit explainability and public scrutiny. Concerns regarding algorithmic bias, discriminatory outcomes, opacity, and difficulties in assigning legal responsibility have emerged as central issues within contemporary administrative law scholarship. International experiences demonstrate that automated decision-making may produce systematic disadvantages for vulnerable groups when procedural safeguards are insufficiently developed (Citron, 2021; Cobbe et al., 2021; Reisman et al., 2020).

Indonesia has entered a period of accelerated digital transformation within governmental institutions. The adoption of electronic government systems, digital public services, big data analytics, and emerging AI applications reflects broader efforts to modernize public administration. Several governmental agencies have begun exploring AI-based tools to enhance administrative efficiency and policy implementation. Existing regulatory frameworks, however, remain fragmented and largely oriented toward digital governance rather than the constitutional implications of automated public decision-making. The Indonesian legal system recognizes the principles of legality, accountability, equality before the law, and protection of constitutional rights under the 1945 Constitution. Questions therefore arise regarding whether AI-generated or AI-assisted administrative decisions satisfy constitutional requirements of due process, procedural fairness, and effective legal remedies. These questions become increasingly urgent as algorithmic systems acquire greater influence over decisions that affect citizens' rights and obligations (Busroh et al., 2025; Wahab & Suhardi, 2025; Atmaja & Maulana, 2026).

Recent scholarship has examined AI governance from diverse legal and administrative perspectives. Roehl and Cromptvoets (2023) investigated the relationship between automated administrative decision-making and principles of good administration, highlighting challenges associated with accountability and procedural legitimacy. Cobbe et al. (2021) analyzed legal safeguards against algorithmic opacity in public administration and emphasized the importance of explainability. Citron (2021) explored constitutional risks arising from automated governmental systems, particularly regarding procedural justice and democratic accountability. Wischmeyer and Rademacher (2020) examined the adaptation of administrative law principles to algorithmic governance, while Veale and Brass (2019) discussed the regulatory implications of machine-learning systems in public-sector decision-making. Research conducted within the European context further demonstrates that algorithmic governance requires robust legal mechanisms capable of preserving human oversight, proportionality, and judicial review (Hacker, 2022; Mendoza & Bygrave, 2023).

Within the Indonesian context, scholarly attention toward AI and public law has increased in recent years. Busroh et al. (2025) analyzed the constitutional implications of AI in government decision-making and emphasized the necessity of legal reform to address emerging governance challenges. Wahab and Suhardi (2025) examined algorithmic transparency as a component of administrative accountability and proposed a stronger recognition of the right to explanation in digital public services. Atmaja and Maulana (2026) evaluated constitutional limitations on state utilization of AI through the perspective of digital constitutionalism. Antoni et al. (2026) assessed the impact of algorithmic decision-making on administrative law principles, while Kurniawan and Purwanto (2025) explored broader constitutional challenges associated with AI-driven public administration. Existing studies have significantly contributed to understanding regulatory, ethical, and governance dimensions of AI deployment in the public sector.

Despite the growing body of literature, an important research gap remains. Most existing studies focus on digital governance, administrative efficiency, regulatory design, algorithmic accountability, or ethical considerations. Limited attention has been directed toward examining AI-assisted administrative decision-making through the specific constitutional framework of due process of law in Indonesia. Current scholarship rarely investigates the constitutional boundaries that should govern governmental reliance on AI when decisions directly affect citizens' legal rights, procedural guarantees, and access to judicial protection. This study seeks to address that gap by analyzing the constitutionality of AI utilization in governmental

administrative decision-making from the perspective of due process of law under the Indonesian constitutional order. The article aims to formulate constitutional standards and legal safeguards capable of ensuring that technological innovation remains consistent with the principles of the rule of law, democratic accountability, and the protection of fundamental rights.

2. Methodology

This study employs a **qualitative legal research method** with a **normative-juridical approach**. The research is designed to examine the constitutionality of Artificial Intelligence (AI) utilization in governmental administrative decision-making from the perspective of the principle of due process of law under the Indonesian constitutional framework. Qualitative legal research is appropriate because the primary objective of the study is not to measure statistical relationships between variables but to analyze legal norms, constitutional principles, judicial doctrines, and regulatory frameworks governing the use of AI in public administration. The normative approach enables a systematic examination of constitutional provisions, statutory regulations, administrative law principles, and scholarly interpretations relevant to automated governmental decision-making.

The study adopts a **constitutional law and administrative law approach**, complemented by a **comparative legal analysis**. The constitutional approach is used to assess the compatibility of AI-assisted administrative decisions with constitutional guarantees contained in the 1945 Constitution of the Republic of Indonesia, particularly principles relating to the rule of law, legal certainty, equality before the law, protection of human rights, and procedural justice. The administrative law approach is utilized to evaluate the conformity of algorithmic decision-making processes with principles of good governance, accountability, transparency, and administrative due process. The comparative dimension examines selected international legal developments concerning automated decision-making, including regulatory and judicial approaches emerging within the European Union and other jurisdictions that have developed legal safeguards for algorithmic governance.

The primary study case focuses on the **potential and emerging use of AI in Indonesian governmental administrative decision-making**, including public service delivery, administrative verification, eligibility determination, risk assessment, licensing administration, and other forms of digital governance that may affect citizens' legal rights and obligations. Rather than concentrating on a single governmental institution, the research analyzes the broader constitutional implications of AI deployment across administrative agencies. This approach is intended to identify constitutional risks and procedural challenges that may arise when governmental decisions are partially or substantially influenced by algorithmic systems.

The research relies primarily on **secondary legal data**. Primary legal materials consist of the Constitution of the Republic of Indonesia of 1945, relevant statutes governing public administration, electronic government systems, electronic information and transactions, personal data protection, public services, administrative governance, and other regulations associated with digital governance and governmental decision-making. Judicial decisions issued by the Constitutional Court and the Supreme Court that address constitutional rights, administrative due process, governmental accountability, and digital governance issues are also examined as primary legal sources.

Secondary legal materials include peer-reviewed journal articles, academic books, conference proceedings, legal commentaries, policy papers, government reports, and publications issued by international organizations concerning AI governance, administrative law, constitutional law, digital constitutionalism, and algorithmic accountability. To ensure scholarly rigor and contemporary relevance, the study prioritizes publications published within the last five years and indexed in reputable academic databases such as Scopus, Web of Science, HeinOnline, SpringerLink, ScienceDirect, Taylor & Francis Online, Wiley Online Library, Sage Journals, and Google Scholar. These sources provide both theoretical and empirical insights regarding the legal implications of automated decision-making systems in the public sector.

Data collection is conducted through a **documentary and literature review technique**. Legal documents, regulations, judicial decisions, academic publications, and policy instruments are systematically

collected, categorized, and reviewed according to their relevance to the research objectives. The collected materials are subsequently analyzed using **qualitative content analysis** and **legal interpretation methods**, including grammatical interpretation, systematic interpretation, constitutional interpretation, and comparative interpretation. Through these analytical techniques, the study identifies constitutional principles governing governmental decision-making, evaluates the compatibility of AI-assisted administrative decisions with due process requirements, and formulates legal safeguards necessary to ensure that the adoption of AI in public administration remains consistent with constitutional values, democratic accountability, and the protection of citizens' fundamental rights.

3. Results and Discussions

1. The Constitutional Foundation of Due Process of Law in Administrative Decision-Making

The principle of due process of law constitutes one of the essential pillars of constitutional democracy and the rule of law. Within the Indonesian constitutional system, due process is not explicitly formulated as a single constitutional provision. Its substance can be derived from various constitutional guarantees, including legal certainty, equality before the law, protection of human rights, fair treatment by governmental institutions, and access to effective legal remedies. These constitutional guarantees are reflected in Articles 1(3), 27(1), 28D(1), and 28I of the 1945 Constitution, which collectively establish procedural limitations on the exercise of governmental power.

In administrative law, due process requires that public authorities exercise their powers through transparent, accountable, rational, and legally justified procedures. Administrative decisions must not only comply with substantive legal norms but also satisfy procedural standards that protect individuals from arbitrary governmental action. Citizens affected by administrative decisions should be informed of the basis of governmental action, provided with opportunities to challenge decisions, and granted access to independent review mechanisms. Such procedural guarantees are indispensable for maintaining public trust in administrative institutions and ensuring governmental accountability.

The increasing adoption of digital technologies in public administration has transformed the operational environment in which due process principles are applied. Digital governance systems facilitate rapid information processing, data integration, and automated service delivery. At the same time, technological innovation creates new constitutional questions regarding the preservation of procedural rights in algorithmically assisted decision-making environments. Existing constitutional principles remain applicable irrespective of technological developments because constitutional guarantees are designed to protect citizens against arbitrary exercises of public authority regardless of the decision-making tools employed.

Previous studies have emphasized that administrative due process remains a fundamental requirement in digital governance environments. Citron (2021) argues that automated governmental systems should not diminish procedural protections traditionally afforded to citizens. Similarly, Roehl and Cromptoets (2023) highlight that algorithmic administration must remain subject to principles of legality, accountability, and transparency. These findings support the proposition that technological innovation cannot justify the relaxation of constitutional safeguards embedded within administrative decision-making processes.

From a constitutional perspective, the legitimacy of AI-assisted administrative decisions depends not solely on technological accuracy but also on the extent to which procedural fairness is maintained. The principle of due process therefore functions as the primary constitutional benchmark for evaluating the legality of governmental reliance on AI technologies. Any administrative system that restricts transparency, impairs legal remedies, or weakens accountability mechanisms may conflict with constitutional requirements regardless of its operational efficiency.

2. Constitutional Challenges of Artificial Intelligence in Government Administrative Decisions

The analysis reveals that the integration of Artificial Intelligence into governmental administrative decision-making generates several constitutional challenges. The first challenge concerns algorithmic opacity. Many AI systems, particularly those utilizing machine learning techniques, operate through highly complex computational processes that are difficult for both citizens and public officials to understand. This

phenomenon, commonly described as the “black box” problem, complicates efforts to identify the reasoning underlying administrative decisions.

The absence of adequate explainability directly affects procedural fairness. Citizens subjected to administrative decisions possess a legitimate expectation to understand the legal and factual basis upon which governmental actions are taken. When administrative outcomes are generated through opaque algorithms, affected individuals may encounter significant obstacles in exercising their right to challenge governmental decisions. This situation creates tension between technological efficiency and constitutional guarantees of procedural justice.

A second challenge relates to algorithmic bias and discriminatory outcomes. AI systems rely heavily on historical data, training datasets, and statistical models. Where datasets contain existing social inequalities or institutional biases, algorithmic outputs may reproduce or amplify discriminatory patterns. Research conducted by Cobbe et al. (2021), Hacker (2022), and Mendoza and Bygrave (2023) demonstrates that algorithmic bias can undermine equality before the law and create unequal treatment among individuals affected by public decisions. Such outcomes are particularly problematic within constitutional democracies where equal protection and non-discrimination constitute fundamental legal principles.

A third challenge concerns accountability and responsibility. Traditional administrative law assumes that governmental decisions can be attributed to identifiable public officials or institutions. AI-assisted decision-making complicates this assumption because multiple actors may be involved in the development, deployment, maintenance, and implementation of algorithmic systems. Questions frequently arise regarding who should be held accountable when automated decisions produce unlawful or harmful consequences. Existing administrative accountability mechanisms were largely developed for human decision-makers and often struggle to accommodate complex technological infrastructures.

The findings indicate that these challenges are highly relevant to Indonesia's ongoing digital transformation agenda. Current regulatory frameworks governing electronic governance, public administration, and personal data protection provide important foundations for digital governance. They do not yet establish comprehensive constitutional safeguards specifically addressing automated governmental decision-making. Similar observations have been reported by Busroh et al. (2025), Wahab and Suhardi (2025), and Kurniawan and Purwanto (2025), who identify significant regulatory gaps regarding algorithmic transparency, explainability, and accountability within Indonesian public administration. The present study extends these findings by demonstrating that such regulatory deficiencies should not merely be viewed as governance concerns but also as constitutional concerns affecting due process rights.

3. Constitutional Limits and Legal Safeguards for AI-Based Administrative Decision-Making in Indonesia

The findings further suggest that AI should not be viewed as an autonomous substitute for governmental decision-makers. Constitutional principles require that technology remain subordinate to legal authority rather than replacing it. The exercise of public power ultimately derives its legitimacy from constitutional norms and democratic accountability, not from computational efficiency. Consequently, governmental reliance on AI must operate within clearly defined constitutional boundaries.

The first constitutional limitation concerns the principle of meaningful human oversight. Administrative decisions affecting fundamental rights, legal status, access to public services, or significant economic interests should remain subject to human review and intervention. Human oversight serves as an essential safeguard against erroneous, discriminatory, or irrational algorithmic outcomes. International regulatory developments, particularly within the European Union's AI governance framework, increasingly recognize human oversight as a prerequisite for lawful automated decision-making.

The second limitation relates to algorithmic transparency and explainability. Citizens must possess the ability to obtain understandable explanations regarding the basis of administrative decisions affecting their rights and obligations. The right to explanation strengthens procedural fairness and facilitates effective judicial review. Transparency also contributes to public trust by enabling external scrutiny of governmental decision-making processes. Scholars such as Veale and Brass (2019), Hacker (2022), and Roehl and Crompvoets (2023) similarly emphasize that explainability constitutes a critical component of accountable AI governance.

The third limitation concerns access to remedies and judicial review. Due process requires that individuals adversely affected by AI-assisted administrative decisions retain effective opportunities to challenge governmental actions through administrative appeals and judicial proceedings. Automated systems should never operate in a manner that restricts citizens' access to legal remedies or impedes judicial oversight. Courts must remain capable of reviewing not only the legality of final administrative decisions but also the procedural integrity of the algorithmic systems contributing to those decisions.

Based on the constitutional analysis, this study proposes a constitutional compliance framework for governmental AI deployment consisting of six interconnected principles: legality, transparency, explainability, human oversight, accountability, and effective remedy. These principles collectively provide normative standards for evaluating the constitutionality of AI-assisted administrative decision-making in Indonesia. Their implementation would help ensure that technological innovation remains aligned with constitutional values, democratic governance, and the protection of fundamental rights.

The contribution of this study lies in shifting the discourse from a predominantly technological and regulatory perspective toward a constitutional perspective centered on due process of law. Existing scholarship generally examines AI governance through the lenses of ethics, innovation policy, or administrative modernization. The present research demonstrates that constitutional safeguards must become the primary foundation for assessing the legitimacy of AI utilization in governmental decision-making. Such an approach is essential for ensuring that digital transformation strengthens rather than weakens constitutional democracy and the rule of law.

4. Conclusion

This study demonstrates that the increasing adoption of Artificial Intelligence (AI) in governmental administrative decision-making presents significant constitutional implications within the Indonesian legal system. Although AI offers substantial benefits in terms of efficiency, consistency, and administrative effectiveness, its utilization in public decision-making cannot be assessed solely from a technological or managerial perspective. The findings reveal that AI-assisted administrative decisions may create constitutional risks associated with algorithmic opacity, limited explainability, discriminatory outcomes, weakened accountability, and restrictions on procedural safeguards. These challenges directly affect the realization of due process of law, which constitutes a fundamental constitutional principle governing the exercise of public authority in a democratic state governed by the rule of law.

The analysis further indicates that existing Indonesian legal frameworks governing public administration, electronic governance, and digital transformation have not yet established comprehensive constitutional safeguards specifically addressing automated governmental decision-making. The absence of explicit legal standards concerning transparency, explainability, human oversight, and algorithmic accountability may create constitutional vulnerabilities when AI systems influence decisions affecting citizens' rights and legal interests. From the perspective of constitutional law, the legitimacy of AI-assisted administrative decisions depends not only on the accuracy of algorithmic outputs but also on the extent to which procedural fairness, legal certainty, equal protection, and access to effective remedies are preserved throughout the decision-making process.

The principal contribution and novelty of this study lie in the development of a constitutional perspective on AI governance that places due process of law at the center of the analysis. Unlike previous studies that predominantly focus on technological innovation, ethics, digital governance, or regulatory policy, this research conceptualizes AI deployment in public administration as a constitutional issue involving the protection of fundamental rights and limitations on governmental power. The study proposes a constitutional compliance framework consisting of six interrelated principles—legality, transparency, explainability, human oversight, accountability, and effective remedy—as normative standards for evaluating the constitutionality of AI-based administrative decision-making in Indonesia. These principles provide a foundation for future legislative reforms and institutional policies aimed at ensuring that digital transformation strengthens constitutional democracy, protects citizens' rights, and remains consistent with the rule of law.

5. References

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