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Administrative Accountability for Artificial Intelligence Decision-Making Systems in Indonesian Governance

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Abstract

The rapid development of Artificial Intelligence (AI) has significantly influenced public governance systems, including administrative decision-making processes in Indonesia. AI offers substantial benefits such as increased efficiency, accelerated public services, improved policy targeting, and data-driven governance. However, the use of AI in governmental decision-making also raises serious legal concerns regarding administrative accountability, transparency, explainability, due process, and state responsibility. This study aims to analyze the legal challenges posed by AI-based decision-making systems in Indonesian governance and to formulate an accountability framework consistent with administrative law principles. The research employed a qualitative method using a literature study approach (library research). Data were collected from statutory regulations, academic journals, books, policy reports, and comparative legal instruments related to AI governance and administrative accountability. The collected data were analyzed through qualitative content analysis and doctrinal legal interpretation. The findings reveal that Indonesia's current administrative law framework remains predominantly designed for human decision-makers and is not yet fully prepared to regulate algorithmic governance. Key challenges include diffusion of responsibility among institutions and vendors, lack of transparency in automated decisions, weak human oversight, poor public-sector data quality, and limited readiness of judicial review mechanisms. The study concludes that accountability for AI-assisted governance must remain attached to the state, regardless of technological mediation. Therefore, Indonesia requires a comprehensive legal framework that includes legal authorization, human supervision, citizen rights to explanation, appeal mechanisms, independent audits, and shared liability standards. Such reforms are essential to ensure that AI strengthens public administration without undermining the rule of law, fairness, and democratic legitimacy.

Keywords: *Artificial Intelligence, Administrative Accountability, Indonesian Governance, Public Law, Algorithmic Decision-Making*

INTRODUCTION

Artificial Intelligence (AI) has rapidly evolved into a transformative governance instrument and is increasingly integrated into public administration across the world. Governments now employ AI systems for taxation management, welfare targeting, migration screening, regulatory enforcement, procurement analysis, and predictive service delivery. According to the Organisation for Economic Co-operation and Development (OECD, 2025), AI adoption in the public sector has expanded because it offers administrative efficiency, faster decision cycles, and improved policy responsiveness. These developments indicate that AI is no longer a peripheral innovation but has become part of state administrative infrastructure. In many jurisdictions, algorithmic tools are already involved in decisions affecting access to social benefits, licensing approvals, and citizen profiling. While these innovations may enhance efficiency, they simultaneously create substantial legal concerns regarding transparency, legality, and due process. This issue becomes especially important when administrative decisions generated through AI directly affect constitutional rights and public entitlements. Consequently, the rise of AI in governance requires urgent legal scrutiny, particularly from the perspective of administrative accountability.

The concept of accountability in administrative law has historically been based on the assumption that governmental decisions are made by identifiable human officials who can be supervised, reviewed, and sanctioned when acting unlawfully. Traditional doctrines of administrative responsibility presuppose the existence of a decision-maker whose reasoning can be examined and whose authority can be challenged before courts or supervisory institutions. However, AI-based decision-making systems complicate this legal architecture because decisions may result from interactions between software models, datasets, programmers,

private vendors, and government operators. Loi and Spielkamp (2021) argue that such delegation of authority to AI creates accountability gaps in public administration because responsibility becomes dispersed across multiple actors. In practice, citizens harmed by automated decisions may struggle to identify who should be legally responsible. This diffusion of responsibility undermines procedural fairness and weakens access to remedies. Therefore, AI governance raises not only technological questions but also fundamental issues concerning the rule of law.

At the global level, legal institutions have begun to respond to these challenges. One of the most important developments is the adoption of the European Union Artificial Intelligence Act, which entered into force in 2024. The Act establishes a risk-based framework and classifies several public-sector uses of AI as high-risk, especially where systems affect essential services, law enforcement, migration control, and public rights (European Union, 2024). High-risk systems are subject to obligations such as human oversight, transparency, documentation, and risk management. In parallel, the OECD AI Principles emphasize that trustworthy AI must be transparent, robust, fair, and accountable (OECD, 2024). These developments demonstrate an emerging international consensus that governments cannot deploy AI without legal safeguards. Nevertheless, these regulatory initiatives remain general frameworks and do not fully resolve how classical doctrines of administrative liability should apply when AI participates in public decision-making. Thus, further scholarship is needed to bridge technology regulation and public law accountability.

Indonesia presents a particularly important case because digital transformation has accelerated significantly during the last decade. Government institutions increasingly rely on digital platforms, biometric verification, integrated population databases, smart city technologies, and automated administrative processes. However, Indonesia still lacks a comprehensive legal framework specifically governing AI in public administration. Existing legislation such as the Law on Government Administration, the Electronic Information and Transactions Law, and the Personal Data Protection Law No. 27 of 2022 only partially address issues relevant to AI deployment. They do not clearly regulate automated decisions, algorithmic explainability, human review rights, or state liability arising from machine-assisted errors. According to OECD (2025), many governments face similar governance gaps where digital innovation advances faster than regulatory adaptation. In Indonesia, this legal vacuum may expose citizens to arbitrary administrative outcomes while simultaneously placing public officials in uncertain legal positions. Therefore, the Indonesian context requires urgent normative clarification before AI becomes deeply institutionalized in governance structures.

Previous studies have made significant contributions to AI ethics, data protection, cybersecurity, and responsible innovation. Numerous scholars have explored fairness, bias mitigation, transparency, and human-centered AI design. Percy et al. (2021) note that many accountability discussions remain principle-based and often lack enforceable institutional mechanisms. Existing Indonesian scholarship has also focused more heavily on electronic transactions, cybercrime, and personal data protection than on administrative law implications of AI. Comparative studies often examine the European Union or North American contexts, leaving developing legal systems underexplored. Consequently, there remains limited research addressing how Indonesian administrative law should respond when AI systems influence permits, welfare distribution, sanctions, or bureaucratic discretion. This reveals a clear research gap: the absence of a doctrinal framework linking AI governance principles with Indonesian mechanisms of administrative review and state responsibility. The present study seeks to address that deficiency.

The novelty of this research lies in three principal dimensions. First, this article reorients the AI debate from general ethical governance toward the more precise field of administrative accountability. Rather than asking whether AI should be fair in abstract terms, the study asks how legal responsibility should be structured when AI contributes to state decisions. Second,

this article contextualizes global standards such as the OECD AI Principles and the EU AI Act within Indonesia's domestic administrative law framework instead of assuming direct transplantation of foreign models. Third, it proposes a responsibility-allocation model involving government agencies, individual officials, and private technology vendors engaged in public-sector AI systems. As Loi and Spielkamp (2021) suggest, accountability in algorithmic administration requires clearer institutional design rather than reliance on broad ethical commitments alone. Accordingly, this study offers an original contribution by converting abstract accountability discourse into operational legal doctrine for Indonesian governance.

The objectives of this study are threefold. First, to assess whether current Indonesian administrative law principles are sufficient to regulate AI-assisted decision-making systems. Second, to examine how liability should be allocated when automated governmental decisions produce unlawful outcomes or violate citizen rights. Third, to formulate a normative accountability model for lawful AI governance in Indonesia. The benefits of this study are both theoretical and practical. Theoretically, it expands administrative law scholarship into the emerging domain of algorithmic governance. Practically, it provides recommendations for legislators, ministries, courts, ombuds institutions, and regional governments regarding responsible AI adoption. OECD (2024) emphasizes that democratic governments must ensure technological innovation remains aligned with public trust and legal legitimacy. This study therefore contributes directly to that policy need.

Ultimately, AI should not be seen as replacing administrative law but as testing its resilience in the digital era. Administrative legitimacy depends not merely on efficiency, but on transparency, reasoned justification, reviewability, equality before the law, and institutional accountability. If AI systems become opaque substitutes for lawful governance, citizen trust may decline despite technological modernization. Conversely, if AI is integrated under clear legal safeguards, it may improve consistency, reduce corruption, and strengthen service delivery. Indonesia is therefore at a critical regulatory crossroads. It may either adopt AI through fragmented experimentation or develop a principled accountability framework grounded in constitutional governance. This article argues that the future legitimacy of Indonesian digital government depends significantly on which path is chosen.

METHOD

This study employed a qualitative research design using a literature study approach to examine the issue of administrative accountability for Artificial Intelligence (AI) decision-making systems in Indonesian governance. Qualitative legal research is particularly appropriate for studies that seek to understand normative concepts, institutional practices, regulatory developments, and interpretative frameworks rather than to measure numerical variables. Since the present article focuses on legal responsibility, accountability structures, and governance principles surrounding the use of AI in public administration, a qualitative approach enables an in-depth exploration of legal texts, scholarly arguments, and policy discourses. According to Creswell and Poth (2018), qualitative research is suitable when researchers intend to interpret meanings, analyze contextual phenomena, and construct conceptual understanding from documentary sources. In the context of this study, qualitative inquiry facilitates a comprehensive examination of how AI challenges traditional doctrines of administrative law, particularly concerning transparency, legality, reviewability, and state liability. Therefore, the research design was selected to generate doctrinal and analytical insights relevant to the Indonesian legal system.

The specific type of research applied in this article was a literature study (library research), which systematically collected and analyzed secondary data derived from authoritative written materials. Literature-based legal research is widely used in socio-legal and doctrinal scholarship because it allows researchers to synthesize statutory developments,

jurisprudential debates, comparative practices, and academic findings relevant to a particular legal issue. Snyder (2019) explains that literature studies are valuable for identifying research gaps, consolidating fragmented knowledge, and developing new theoretical perspectives. In this study, the literature review was not limited to descriptive compilation but was used analytically to evaluate the adequacy of current legal frameworks governing AI-assisted administrative decisions in Indonesia. Through this method, the study critically assessed how international AI governance standards may inform domestic administrative law reform. Accordingly, the literature study approach was considered the most suitable method to address an emerging topic where empirical institutional data remain limited but normative discourse is rapidly expanding.

The data sources used in this research consisted entirely of secondary data, divided into primary legal materials, secondary legal materials, and supporting policy documents. Primary legal materials included Indonesian legislation relevant to digital governance and administrative accountability, such as the Law on Government Administration, the Electronic Information and Transactions Law, the Personal Data Protection Law No. 27 of 2022, and other regulations concerning public sector digitalization. International regulatory materials were also examined, including the European Union Artificial Intelligence Act and the OECD AI Principles, because comparative references are essential in emerging technology governance (European Union, 2024; OECD, 2024). Secondary legal materials comprised peer-reviewed journal articles, scholarly books, policy reports, conference papers, and academic commentaries discussing AI regulation, public accountability, administrative law, and algorithmic governance. Additional supporting sources included reports from international organizations, governmental policy papers, and institutional guidelines concerning AI implementation in public services. The use of multiple documentary sources increased analytical depth and strengthened the credibility of the findings.

Data collection was conducted through a systematic document review technique. Relevant sources were identified through academic databases such as Scopus, Google Scholar, HeinOnline, JSTOR, SSRN, and institutional repositories, using keywords including “AI accountability,” “administrative law and artificial intelligence,” “algorithmic governance,” “public sector AI regulation,” “state liability for automated decisions,” and “Indonesia digital governance.” The inclusion criteria prioritized publications issued within the last five years to ensure relevance to recent technological and regulatory developments, while foundational earlier works were included where conceptually necessary. Documents were then screened based on relevance, academic quality, citation impact, and direct relation to the research objectives. According to Xiao and Watson (2019), systematic literature searching improves transparency and minimizes selection bias in qualitative reviews. After selection, all materials were organized thematically into categories such as accountability, transparency, liability, comparative regulation, administrative justice, and Indonesian governance reform. This process ensured that data collection remained rigorous and replicable.

The method of data analysis employed in this study was qualitative content analysis combined with doctrinal legal analysis. Qualitative content analysis was used to identify recurring concepts, interpret normative patterns, and compare legal approaches across different jurisdictions. Bengtsson (2016) notes that content analysis enables researchers to transform textual materials into meaningful analytical categories through systematic coding and interpretation. In this study, documents were read iteratively to identify themes such as explainability, human oversight, procedural fairness, review rights, and responsibility allocation. These themes were then interpreted through doctrinal legal analysis, which examined consistency between emerging AI governance principles and established doctrines of Indonesian administrative law. The doctrinal component focused on legality, abuse of power, state responsibility, administrative discretion, and citizen remedies. Through this dual analytical method, the study developed normative arguments concerning how Indonesian governance institutions should structure accountability when AI systems influence public decisions.

To ensure the trustworthiness of the research, the study applied source triangulation by comparing statutory texts, academic scholarship, and policy reports from different institutions. Interpretative consistency was maintained by repeatedly cross-checking findings against the core research questions and theoretical framework. In addition, the study adopted a comparative perspective by analyzing how international governance models may be adapted rather than transplanted into Indonesia's legal context. Creswell and Poth (2018) emphasize that qualitative rigor depends on transparency, coherence, and reflexive interpretation. Therefore, all analytical steps in this article were structured systematically to ensure scholarly reliability. Ultimately, the chosen methodology enabled the article to produce a comprehensive normative assessment of administrative accountability for AI decision-making systems while remaining grounded in contemporary literature and comparative legal developments.

RESULTS AND DISCUSSION

The analysis demonstrates that the adoption of Artificial Intelligence (AI) in Indonesian governance has progressed more rapidly than the development of legal and institutional safeguards. Public institutions increasingly utilize digital infrastructures such as biometric identity systems, integrated databases, online licensing platforms, automated complaint handling systems, predictive analytics, and data-driven monitoring mechanisms. Although not all of these systems employ advanced machine learning in a strict technical sense, many already operate through algorithmic logic that substantially influences administrative outcomes. This trend reflects a broader state ambition to modernize bureaucracy, improve efficiency, and reduce procedural delays. However, the legal framework governing these innovations remains fragmented and reactive. Existing laws concerning public administration, electronic information, and personal data protection regulate adjacent issues but do not specifically address AI-assisted governmental decisions. As a result, agencies may deploy automated systems without clear standards regarding legality, procedural fairness, review rights, or institutional liability. This finding indicates that Indonesia faces a classic condition of regulatory lag, where technological implementation advances faster than normative governance capacity.

A second major finding concerns the structural incompatibility between traditional administrative law and AI-driven decision-making processes. Indonesian administrative law, like many civil law systems, is historically designed around the premise that governmental authority is exercised by human officials who can be identified, supervised, and held accountable. Administrative decisions are expected to contain legal reasoning, identifiable authority, procedural compliance, and opportunities for objection. AI systems challenge these assumptions because decisions may emerge from data models, automated classifications, or predictive scoring tools rather than direct human reasoning. In practice, an administrative officer may merely validate an algorithmic recommendation without independently understanding its logic. This creates ambiguity regarding who the true decision-maker is: the public official who signs the outcome, the institution that procured the system, or the software architecture that generated the recommendation. Consequently, doctrinal concepts such as discretion, abuse of power, and reasoned decision-making become more difficult to apply in machine-assisted governance contexts.

Another important finding is the diffusion of accountability across multiple actors involved in algorithmic administration. Unlike conventional public decisions that can usually be traced to a specific office or official, AI systems involve complex chains of participation including ministries, local agencies, software vendors, data engineers, procurement units, database managers, and supervisory personnel. When harm occurs—such as wrongful denial of welfare assistance, rejection of permits, or erroneous regulatory sanctions—responsibility becomes institutionally fragmented. Citizens may not know whether they should challenge the

ministry, the regional office, the vendor, or the individual operator. This diffusion weakens the practical accessibility of remedies and may generate bureaucratic blame-shifting. From a legal perspective, the inability to attribute responsibility clearly undermines one of the central purposes of administrative law: ensuring that public power remains answerable to those affected by it.

Table 1. Distribution of Responsibility in AI-Based Administrative Governance

Actor	Primary Role	Potential Legal Issue
Government Agency	Deploys AI system in governance	Public liability for unlawful decisions
Public Official	Uses or approves output	Negligence / failure of supervision
Private Vendor	Designs software/model	Defective system design
Data Provider	Supplies datasets	Inaccurate or biased data
Oversight Body	Supervises legality	Failure to monitor risks
Court / Tribunal	Reviews disputes	Limited technical capacity

The study further found that transparency and explainability constitute the most significant procedural risks associated with AI deployment in governance. Many AI systems function as "black box" tools in which the internal logic of decision outputs is difficult to interpret, especially for ordinary citizens and even for frontline bureaucrats. In administrative contexts, this means that applicants may receive permit rejections, subsidy exclusions, or compliance risk labels without understanding the reasons behind those outcomes. Such opacity is inconsistent with established administrative principles requiring reasoned decisions and fair notice. If affected persons cannot understand why a decision was made, their ability to contest it becomes substantially weakened. Courts also face difficulty reviewing decisions whose logic is embedded in proprietary code or statistical models rather than written reasoning. Therefore, explainability is not merely a technical preference but a legal necessity directly connected to due process and access to justice.

A related finding concerns the uncertain role of human oversight. International AI governance frameworks often emphasize that humans must remain "in the loop," yet this phrase is frequently underdefined in operational legal terms. The present analysis indicates that symbolic human approval does not necessarily constitute meaningful oversight. If officials automatically approve algorithmic recommendations without scrutinizing the data basis, assumptions, or consequences, then human control becomes procedural fiction rather than substantive accountability. Conversely, requiring manual review of every AI output may eliminate efficiency gains and overwhelm administrative capacity. Indonesia currently lacks statutory guidance specifying when officials must independently assess algorithmic recommendations, when overrides are mandatory, and what level of competence is required for AI supervision. This gap creates uncertainty both for citizens seeking accountability and for civil servants who may be held responsible for systems they do not fully understand.

The research also identified serious risks arising from data quality deficiencies. AI systems depend on reliable datasets, yet public-sector data environments often suffer from duplication, inconsistency, outdated records, fragmented databases, and regional disparities in administrative capacity. Inaccurate population records, incomplete socio-economic data, or inconsistent inter-agency integration can produce distorted algorithmic outcomes. For example, citizens may be wrongly excluded from welfare programs, categorized as non-compliant taxpayers, or flagged for regulatory scrutiny based on erroneous data rather than unlawful conduct. These harms are particularly serious because they may appear objective due to the perceived neutrality of technology. In reality, algorithmic injustice often reflects pre-existing weaknesses in administrative data governance. Thus, fairness in AI governance depends not

only on model design but also on the quality and integrity of the underlying public data ecosystem.

Table 2. Major Risks of Poor Data Quality in Administrative AI Systems

Data Problem	Potential Administrative Impact
Outdated records	Incorrect eligibility decisions
Duplicate identities	Fraud suspicion / service denial
Missing socio-economic data	Mis-targeted welfare distribution
Inconsistent agency databases	Contradictory administrative outcomes
Regional reporting disparities	Unequal treatment among citizens

Another significant finding concerns the limited readiness of judicial review mechanisms to evaluate algorithmic decisions. Administrative courts traditionally examine written decrees, legal reasoning, procedural compliance, and abuse of discretion. AI-assisted decisions, however, may rely on probabilistic scoring systems, continuously updated models, or vendor-controlled software whose logic is difficult to disclose. Judges may face evidentiary obstacles in determining causation, identifying fault, or interpreting technical documentation. Agencies may invoke trade secrecy or cybersecurity concerns to resist disclosure of system architecture. Without procedural adaptation, courts risk becoming ineffective forums for resolving algorithmic governance disputes. Therefore, modernization of administrative justice is necessary, including expert evidence mechanisms, algorithmic audit disclosure rules, and judicial training in digital governance disputes.

The analysis further demonstrates that private vendors increasingly exercise indirect public power through state procurement arrangements. Many governmental AI systems are not developed internally but purchased from technology companies that design models, determine optimization criteria, and structure decision pathways. This situation reflects a broader legal concern that corporations can become influential actors in governance while accountability mechanisms remain underdeveloped, particularly when corporate conduct affects public interests (Tarigan, 2024). Through these systems, private actors may shape welfare targeting thresholds, surveillance triggers, risk prioritization, or licensing triage processes. Yet vendors are commonly regulated through contract law rather than public law principles such as transparency, equality, and constitutional accountability. This creates a legitimacy problem: decisions affecting citizens may be materially shaped by private code that is insulated from direct public challenge. Accordingly, procurement law and administrative law must be better integrated so that outsourced digital governance remains publicly accountable.

Comparative analysis reveals that other jurisdictions provide useful lessons for Indonesia. The European Union AI Act adopts a risk-based framework imposing strict obligations on high-risk systems used in areas affecting rights and essential services. OECD principles emphasize trustworthy AI grounded in accountability, transparency, and robustness. Canada and the United Kingdom have introduced algorithmic impact assessments and public-sector deployment standards. These examples show that democratic states increasingly recognize the need to regulate AI not only as technology but as governance infrastructure. However, direct transplantation of foreign models would be inappropriate without adaptation to Indonesian constitutional structure, administrative culture, and institutional capacity. The relevant lesson is methodological: AI governance requires ex ante safeguards, ongoing oversight, and accessible remedies.

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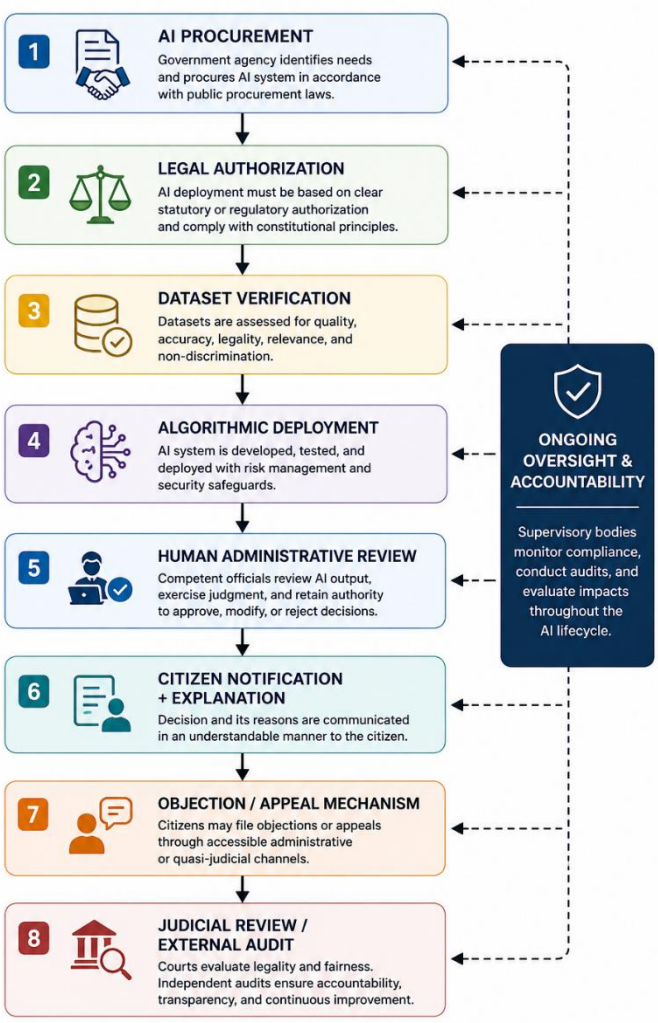

Figure 1. Proposed Accountability Flow for Public-Sector AI in Indonesia

Based on these findings, the study concludes that Indonesia requires a reconstructed accountability model for AI-assisted governance. Such a model should include several core elements: first, no deployment of rights-affecting AI systems without explicit legal authorization; second, mandatory human review for decisions affecting legal status or public entitlements; third, a right to understandable explanations for affected citizens; fourth, rapid objection and correction mechanisms; fifth, independent auditability of datasets and models; sixth, shared liability rules among agencies, officials, and vendors; and seventh, institutional capacity-building for courts and oversight bodies. These measures would preserve innovation while ensuring that automation does not erode legality.

The central theoretical finding of this research is that AI does not eliminate administrative responsibility; rather, it transforms the form through which responsibility must be structured. Government cannot avoid liability merely because a machine produced the recommendation or output. Once AI is integrated into state decision-making, its actions remain attributable to public authority. Therefore, algorithmic governance must remain subject to constitutional legality, due process, equality before the law, and democratic accountability. Indonesia currently stands at a critical transitional moment: if accountability reforms are delayed, AI may produce efficient but legally fragile governance. If properly regulated, however, AI can strengthen administrative capacity while preserving citizen rights and institutional legitimacy.

DISCUSSION

The findings of this study confirm that the expansion of Artificial Intelligence (AI) in Indonesian governance is occurring within a broader global transition toward algorithmic public administration. Across many jurisdictions, governments are increasingly adopting AI tools to improve efficiency, predict risks, automate service delivery, and optimize bureaucratic performance. Indonesia is not isolated from this trend. National initiatives related to digital transformation, smart cities, integrated population databases, and electronic public services illustrate that governance modernization has become a strategic priority. However, as demonstrated in the results section, technological adoption has progressed more rapidly than the development of legal accountability mechanisms. This condition reflects what scholars often describe as the governance gap of innovation, where institutions adopt emerging technologies before legal norms, oversight mechanisms, and procedural safeguards are adequately established (OECD, 2025). In the author's view, this gap is particularly concerning in public administration because state decisions affect rights, obligations, and access to essential services. Unlike private-sector automation, administrative AI operates within the sphere of public power and therefore requires stronger legal justification.

One of the most significant contemporary phenomena supporting this concern is the increasing use of automated systems in welfare targeting, immigration control, predictive policing, taxation, and social risk profiling in various countries. International experiences have shown that algorithmic systems can produce discriminatory or unlawful outcomes when deployed without adequate safeguards. The Dutch childcare benefits scandal, for example, became a prominent case where automated risk assessment mechanisms contributed to wrongful accusations of fraud against thousands of families, causing severe social and financial harm (Amnesty International, 2023). Similarly, debates in the United Kingdom over algorithmic grading systems and welfare analytics revealed that data-driven governance may reproduce inequality when human review is weak. These examples demonstrate that administrative AI is not inherently neutral. Rather, algorithmic systems may amplify institutional biases embedded in data or design choices. The relevance for Indonesia is clear: if AI is introduced into welfare distribution, tax monitoring, or permit systems without robust accountability rules, similar injustices may emerge under the appearance of technical objectivity. The author argues that Indonesia should treat foreign failures as preventive lessons rather than waiting for domestic crises to occur.

The findings regarding the inadequacy of traditional administrative law are strongly connected to classical theories of accountability and the rule of law. According to Bovens (2007), accountability requires a relationship in which an actor is obliged to explain conduct, justify decisions, and face consequences where misconduct is established. Traditional public administration satisfies this model through identifiable officials, written decisions, and hierarchical supervision. AI systems complicate each of these elements. Decision logic may be opaque, responsibility may be distributed across institutions, and sanctions may be difficult to impose when causation is technologically complex. From a rule of law perspective, this is problematic because legality requires not only that state action be authorized by law, but also that power be reviewable and reasoned. If algorithmic outputs significantly determine administrative outcomes while their logic remains inaccessible, then formal legality may survive while substantive legality deteriorates. In the author's assessment, Indonesian administrative law must reinterpret accountability doctrines so that responsibility follows the exercise of power, regardless of whether that power is exercised by a human official or mediated through software.

Another key issue revealed by the findings is the problem of transparency and explainability. Contemporary AI systems, particularly machine learning models, may produce outputs through correlations that are difficult to interpret even by developers. In commercial contexts this may be tolerated to some degree, but in governance contexts opacity directly

conflicts with due process principles. Citizens affected by administrative decisions are generally entitled to know the reasons behind adverse outcomes and to challenge them through fair procedures. Wachter, Mittelstadt, and Floridi (2017) note that explainability is central to protecting individual autonomy and contestability in automated decision systems. This observation is highly relevant to Indonesian governance, where citizens may already face bureaucratic barriers in accessing reasons for conventional administrative decisions. If opaque AI systems are layered onto existing bureaucratic complexity, public trust may decline further. The author contends that explainability should be recognized as a legal right in administrative AI contexts, not merely a technical best practice. Government agencies should therefore be obligated to provide understandable explanations when algorithmic systems influence rights-affecting decisions.

The study's findings on human oversight also deserve deeper reflection. Many international policy frameworks advocate keeping humans "in the loop," but such language may become symbolic if not legally operationalized. Human oversight is meaningful only when officials possess authority, competence, and sufficient time to critically evaluate algorithmic outputs. If public officers simply click approval buttons on AI-generated recommendations, oversight becomes ceremonial rather than substantive. This risk is particularly acute in bureaucracies under pressure to improve efficiency with limited staffing. In Indonesia, where administrative workloads can be substantial and digital literacy varies across regions, superficial oversight may become common if regulations remain vague. According to the OECD (2024), effective human oversight requires clear institutional roles, training, escalation pathways, and accountability assignment. The author agrees with this position and adds that Indonesian reform should distinguish between low-risk automation (such as document sorting) and high-risk decisions affecting legal status, welfare, or sanctions, where mandatory substantive human review should be required.

The findings concerning data quality are equally significant when interpreted through theories of administrative justice and equality before the law. AI systems depend on historical and current datasets, yet administrative databases in developing contexts often contain inconsistencies, missing records, and regional disparities. If poor-quality data are used to train or operate AI systems, the resulting decisions may systematically disadvantage already vulnerable groups. Eubanks (2018) demonstrates how automated systems can deepen inequality when public-sector technologies target low-income communities using flawed assumptions and data asymmetries. Indonesia's diverse geography, uneven administrative infrastructure, and varying local capacity make this warning particularly relevant. For example, citizens in remote regions may suffer from outdated records more frequently than those in urban centers, leading to unequal algorithmic treatment. The author therefore argues that data governance must be understood as a constitutional fairness issue rather than merely an administrative technicality. Before sophisticated AI tools are deployed, the state must ensure that underlying citizen data are accurate, inclusive, and regularly audited.

Another important discussion concerns the role of private vendors in public-sector AI. The findings show that many governments acquire technological systems through procurement rather than internal development. This means private companies may shape public decision-making criteria through coding choices, optimization goals, and system architecture. Yet private vendors are often shielded by trade secrecy, intellectual property claims, and contractual limitations. Such arrangements may create what scholars call privatized governance, where private actors exercise public influence without corresponding democratic accountability (Yeung, 2018). In Indonesia, where outsourcing of digital services is common, this issue requires urgent attention. The author believes that procurement contracts for governmental AI should include mandatory clauses on transparency, audit access, bias testing, liability sharing, and public-interest compliance. When technology vendors participate in decisions affecting

citizen rights, they should not remain outside the normative reach of administrative accountability.

The comparative findings regarding the European Union AI Act and OECD principles provide valuable guidance for Indonesia. The EU AI Act represents one of the most advanced regulatory efforts by recognizing that certain AI uses in government are inherently high-risk and therefore require strict obligations. Its risk-based model offers a pragmatic framework because not all AI uses should be regulated identically. A chatbot answering routine inquiries does not pose the same legal risk as an AI system recommending sanctions or determining welfare eligibility. Likewise, OECD principles emphasize trustworthy AI rooted in human rights, transparency, and accountability. However, direct transplantation of foreign models into Indonesia may be ineffective if domestic institutional capacity is overlooked. Regulatory borrowing must be selective and contextual. In the author's opinion, Indonesia should adopt the logic of risk-based regulation while tailoring implementation to its own administrative structures, judicial capacity, and decentralization system. The goal should not be copying Europe, but constructing an Indonesian model of lawful digital governance.

The findings also reveal an urgent need to modernize administrative dispute resolution. In addition to judicial mechanisms, democratic oversight by legislative institutions remains essential to supervise executive deployment of AI technologies in governance. As noted by Syaidi (2025), constitutional oversight instruments such as the right of inquiry represent important mechanisms for ensuring executive accountability within Indonesia's legal framework. If citizens challenge AI-assisted decisions, courts and quasi-judicial bodies must be able to examine algorithmic evidence, data provenance, and decision pathways. Yet many legal systems—including Indonesia's—were designed for documentary bureaucratic decisions rather than computational governance. Without institutional adaptation, access to justice may become illusory. Citizens may formally possess appeal rights but lack the practical means to contest technical systems. The author recommends the creation of procedural innovations such as expert panels, algorithmic disclosure orders, simplified complaint channels, and ombudsman competence in digital disputes. These reforms would ensure that procedural rights remain effective in an era of automation.

From a broader theoretical perspective, the study supports the proposition that AI does not eliminate state responsibility but transforms its operational form. Delegating decision-making to technology does not dissolve constitutional obligations. When a government agency chooses to rely on an AI system, that reliance itself is a state act subject to legality, proportionality, and accountability. This aligns with public law theory, which holds that governments cannot contract out or automate away their duties toward citizens. In the author's view, attempts to blame "the algorithm" for harmful decisions should be rejected as legally insufficient. Machines do not hold public office; institutions do. Therefore, accountability must remain anchored in state responsibility even where technology mediates decision processes.

Finally, Indonesia currently stands at a decisive moment in governance modernization. AI can potentially reduce corruption, standardize procedures, accelerate services, and improve policy targeting. Yet without legal safeguards, it may also entrench opacity, reproduce inequality, and weaken democratic control over administration. The future legitimacy of Indonesian digital governance depends on whether accountability is embedded at the design stage rather than imposed after crises occur. The author concludes that legal reform should proceed simultaneously with technological adoption. Efficiency should be welcomed, but never at the expense of legality, fairness, and citizen rights. In that sense, the challenge is not whether Indonesia should use AI in governance, but whether it can govern AI through law.

CONCLUSION

This study concludes that the integration of Artificial Intelligence (AI) into Indonesian public governance has created significant opportunities for improving administrative efficiency, accelerating service delivery, enhancing policy targeting, and strengthening bureaucratic modernization. However, these benefits are accompanied by serious legal and institutional challenges, particularly regarding administrative accountability. The findings demonstrate that Indonesia's current administrative law framework remains predominantly human-centered and has not been adequately adapted to address AI-assisted decision-making systems. As a result, critical issues such as diffusion of responsibility, lack of transparency, weak explainability, uncertain human oversight, poor data quality, and limited judicial readiness may undermine legality, procedural fairness, and citizen rights. The study further confirms that accountability cannot be displaced merely because decisions are mediated through technology; rather, state institutions remain fully responsible for all decisions generated or influenced by AI systems. Therefore, the future legitimacy of Indonesian digital governance depends on the state's ability to construct a comprehensive accountability framework that combines legal authorization, meaningful human supervision, transparency rights, contestability mechanisms, independent audits, vendor responsibility, and adaptive judicial review. In essence, AI should function as an instrument to strengthen public administration, not as a mechanism that weakens the rule of law.

For future research, several important directions are recommended. First, empirical studies should examine how Indonesian ministries, regional governments, and public agencies are currently adopting algorithmic systems in practice, including the level of oversight and citizen impact. Second, comparative legal research is needed to evaluate how countries such as the European Union member states, Canada, Singapore, and South Korea regulate public-sector AI accountability, and how such models may be adapted to Indonesia. Third, future scholarship should explore sector-specific AI governance in sensitive areas such as taxation, social welfare, immigration, healthcare, policing, and judicial administration. Fourth, interdisciplinary studies combining law, computer science, and public policy are necessary to develop practical standards for explainability, bias auditing, and algorithmic due process. Finally, normative constitutional research should investigate whether AI-assisted governance requires new interpretations of equality before the law, administrative justice, and digital citizenship in Indonesia. These future studies will be essential in ensuring that technological progress remains aligned with democratic governance and legal certainty.

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