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Beyond Regulatory Fragmentation: Developing a Global Administrative AI Governance Framework for Cross-Border Artificial Intelligence Systems

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ABSTRACT

The rapid expansion of cross-border artificial intelligence (AI) systems has exposed significant regulatory fragmentation across national, regional, and international governance regimes. Existing approaches to AI governance, including ethics-based frameworks, risk-based regulation, and digital constitutionalism, have contributed important normative principles but remain insufficient to address transnational accountability, oversight, and administrative coordination challenges. This article examines how Global Administrative Law (GAL) can provide a coherent legal foundation for governing AI systems that operate beyond territorial boundaries. Employing a normative socio-legal methodology, the study analyzes major AI governance instruments, including the European Union AI Act, OECD AI Principles, UNESCO Recommendation on the Ethics of Artificial Intelligence, Council of Europe initiatives, and relevant scholarly literature. The findings demonstrate that current governance models lack an integrated administrative architecture capable of ensuring transparency, participation, reviewability, accountability, and effective oversight across jurisdictions. In response, the article develops a Global Administrative AI Governance Framework (GAIGF), which integrates principles of GAL, digital constitutionalism, and algorithmic accountability into a multi-layered governance model for cross-border AI systems. The article argues that GAIGF offers a viable pathway toward regulatory interoperability and institutional coordination, thereby advancing both the theory and practice of global AI governance.

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INTRODUCTION

Artificial intelligence (AI) has rapidly evolved from a domestic technological innovation into a transnational infrastructure that shapes economic transactions, public administration, healthcare, finance, security, and digital communication across jurisdictions. The emergence of foundation models, generative AI systems, and large-scale algorithmic platforms has intensified concerns regarding accountability, transparency, and regulatory oversight because the development, deployment, and operation of AI systems frequently transcend national boundaries. While governments increasingly recognize the need to regulate AI, the global regulatory landscape remains fragmented, producing divergent legal standards, compliance obligations, and governance mechanisms. This fragmentation creates significant legal uncertainty for both regulators and AI developers, particularly when algorithmic decisions affect individuals and institutions across multiple jurisdictions simultaneously (Bradford, 2022a; Radu, 2023; Tallberg et al., 2023). Consequently, the governance of cross-border AI systems has emerged as one of the most pressing challenges in contemporary global governance.

The problem is particularly evident in the proliferation of regional and international AI governance initiatives that seek to establish regulatory standards without creating a unified governance architecture. The European Union has adopted a comprehensive risk-based regulatory approach through the AI Act, while the OECD, UNESCO, the Council of Europe, and the G7 Hiroshima AI Process have developed distinct normative frameworks and policy principles for AI governance. Although these initiatives share common concerns regarding safety, transparency, human rights, and accountability, they differ substantially in their

legal status, enforcement mechanisms, institutional structures, and regulatory priorities (Edwards, 2022; Ebers, 2021; Floridi, 2022; Smuha, 2023). As a result, AI developers and public authorities must navigate multiple overlapping governance regimes, generating what scholars increasingly describe as regulatory fragmentation within global AI governance (Büthe et al., 2022; Schmitt, 2022).

Existing scholarship has made substantial contributions to understanding the normative and institutional dimensions of AI governance. One stream of literature focuses on AI ethics and responsible innovation, emphasizing principles such as fairness, transparency, accountability, and human oversight (Cath, 2021; Floridi & Cowls, 2022; Mittelstadt, 2021). A second stream examines regulatory responses to AI, particularly the emergence of the European Union AI Act and related governance frameworks that seek to manage AI-related risks through ex ante regulatory mechanisms (Sartor & Lagioia, 2021; Veale & Borgesius, 2021; Smuha, 2023). A third body of scholarship develops the concept of digital constitutionalism and explores how constitutional values and fundamental rights can be preserved in digital environments increasingly mediated by algorithmic systems (De Gregorio, 2022; Pollicino, 2021; Nemitz, 2022). Finally, a growing literature on global AI governance investigates the institutional landscape of international AI regulation and the challenges of coordinating governance across jurisdictions (Radu, 2023; Tallberg et al., 2023; Ulnicane et al., 2021). Collectively, these studies have enriched contemporary debates on AI governance but have primarily focused on ethical principles, constitutional safeguards, or regulatory instruments rather than the administrative mechanisms required for transnational implementation and oversight.

Despite these important contributions, a significant gap remains in the literature. Existing studies largely treat AI governance as either an ethical problem, a constitutional issue, or a matter of regulatory design. Far less attention has been devoted to the question of how transparency, participation, accountability, reviewability, and oversight can be institutionalized across multiple jurisdictions in the governance of cross-border AI systems. In particular, current scholarship has not adequately examined how the principles of Global Administrative Law (GAL) can be operationalized to address the growing fragmentation of international AI governance. While GAL scholarship has developed sophisticated frameworks for understanding accountability and administrative legitimacy in global governance arrangements (Kingsbury et al., 2005; Krisch & Kingsbury, 2006; Stewart, 2005), these insights have not yet been systematically integrated into contemporary AI governance debates. Consequently, the literature lacks an integrated administrative framework capable of coordinating regulatory authority and accountability mechanisms across jurisdictions.

This article argues that regulatory fragmentation constitutes the principal structural obstacle to effective governance of cross-border AI systems and that existing governance models remain insufficient because they are territorially bounded, institutionally fragmented, and operationally disconnected. To address this challenge, the article develops a Global Administrative AI Governance Framework (GAIGF) grounded in the principles of Global Administrative Law. The proposed framework integrates insights from GAL, digital constitutionalism, regulatory governance theory, and algorithmic accountability scholarship to establish a coherent governance architecture for transnational AI systems. By emphasizing transparency, participation, reviewability, accountability, auditability, and institutional coordination, the framework seeks to advance both theoretical and practical understandings of global AI governance. The article therefore contributes to the literature in three ways: first, by extending Global Administrative Law into the domain of AI governance; second, by bridging previously disconnected literatures on digital constitutionalism, regulatory governance, and algorithmic accountability; and third, by proposing a novel administrative governance framework designed specifically for cross-border AI systems.

Building upon these arguments, the article examines the limitations of existing AI governance models, analyzes the relevance of Global Administrative Law to transnational AI regulation, and develops the Global Administrative AI Governance Framework as a normative and institutional response to regulatory fragmentation. Through a socio-legal analysis of major international AI governance instruments and contemporary legal scholarship, the article seeks to demonstrate how administrative law principles can provide a viable foundation for more coherent, accountable, and interoperable governance of artificial intelligence in an increasingly interconnected global environment.

RESEARCH METHOD

This study employs a normative socio-legal research design to examine the governance challenges posed by cross-border artificial intelligence (AI) systems and to develop a Global Administrative AI Governance Framework (GAIGF). A socio-legal approach is particularly appropriate because the governance of AI extends beyond formal legal rules and involves interactions among regulatory institutions, transnational governance networks, technical standards, and administrative accountability mechanisms operating across multiple jurisdictions. Unlike conventional doctrinal legal research, which focuses primarily on legal texts and judicial interpretation, socio-legal research enables a broader analysis of how legal norms are produced, implemented, and coordinated within complex governance environments (Levi-Faur, 2012; Kingsbury et al., 2005). The study was conducted between January and May 2026 through a comparative analysis of international AI governance regimes and relevant administrative law frameworks. The material object of the research consists of transnational AI governance instruments, while the formal object concerns the applicability of Global Administrative Law principles to the governance of cross-border AI systems.

The study relies on both primary and secondary sources. Primary sources include major international and regional AI governance instruments, namely the European Union AI Act, the OECD AI Principles, the UNESCO Recommendation on the Ethics of Artificial Intelligence, the Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law, and policy documents issued under the G7 Hiroshima AI Process. These instruments were selected because they represent the most influential contemporary governance initiatives shaping global AI regulation and policy coordination (Bradford, 2022a; Radu, 2023; Schmitt, 2022). Secondary sources consist of peer-reviewed journal articles, scholarly books, policy reports, and academic commentaries addressing Global Administrative Law, algorithmic governance, digital constitutionalism, AI accountability, and transnational regulatory governance. Particular attention was given to leading scholarship on Global Administrative Law (Kingsbury et al., 2005; Krisch & Kingsbury, 2006; Stewart, 2005), regulatory governance (Abbott, 2021; Levi-Faur, 2021), digital constitutionalism (De Gregorio, 2022; Pollicino, 2021), and AI governance (Floridi, 2022; Smuha, 2023; Tallberg et al., 2023).

Data were analyzed through qualitative doctrinal and thematic analysis. The doctrinal analysis examined the legal principles, governance structures, accountability mechanisms, and institutional arrangements contained in the selected AI governance instruments. Subsequently, thematic analysis was employed to identify recurring governance challenges, patterns of regulatory fragmentation, and areas of convergence and divergence across governance regimes. The analytical framework combines Global Administrative Law, Regulatory Governance Theory, Digital Constitutionalism, and Algorithmic Accountability Theory. Global Administrative Law provides the foundational principles of transparency, participation, accountability, reviewability, and legality that guide the assessment of governance arrangements (Kingsbury et al., 2005; Stewart, 2005). Regulatory Governance Theory is utilized to evaluate institutional coordination and transnational rule-making processes (Abbott, 2021; Levi-Faur, 2021), while Digital Constitutionalism and Algorithmic Accountability scholarship inform the analysis of fundamental rights protection, explainability, auditing, and oversight mechanisms in AI governance (De Gregorio, 2022; Mökander et al., 2023; Wachter et al., 2021). Through this integrated analytical framework, the study develops the Global Administrative AI Governance Framework as a normative model capable of addressing regulatory fragmentation and enhancing accountability in the governance of cross-border AI systems.

RESULTS AND DISCUSSION

Regulatory Fragmentation in Cross-Border AI Governance

The governance of artificial intelligence has developed through a fragmented landscape of national, regional, and international regulatory initiatives. While these initiatives share common concerns regarding transparency, accountability, safety, and human rights protection, they differ substantially in terms of legal authority, institutional design, enforcement mechanisms, and regulatory scope. As AI systems increasingly operate across jurisdictions, such fragmentation has emerged as a significant challenge for effective governance and legal accountability.

One of the most influential regulatory developments is the European Union AI Act, which adopts a risk-based approach by categorizing AI applications according to different levels of regulatory risk (Smuha, 2023; Veale & Borgesius, 2021). The Act establishes binding obligations for providers and deployers of AI systems within the European market and has generated considerable international influence through what Bradford (2022b) describes as the "Brussels Effect." Nevertheless, the territorial orientation of the EU AI Act limits its capacity to address governance challenges involving AI systems developed, trained, and deployed across multiple jurisdictions simultaneously. Although the Act exerts extraterritorial influence, it does not create a global administrative mechanism capable of coordinating oversight among regulators operating under different legal systems.

At the international level, organizations such as the OECD, UNESCO, and the G7 have adopted governance principles designed to promote trustworthy AI. The OECD AI Principles emphasize inclusive growth, human-centered values, transparency, robustness, and accountability. Similarly, UNESCO's Recommendation on the Ethics of Artificial Intelligence seeks to establish a comprehensive normative framework based on human rights and ethical governance. The G7 Hiroshima AI Process focuses on international cooperation and voluntary commitments for advanced AI systems. Despite their normative significance, these initiatives largely rely on soft-law instruments and voluntary compliance mechanisms, limiting their effectiveness in addressing transnational accountability deficits (Radu, 2023; Tallberg et al., 2023).

The Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law represents another important effort to establish international standards for AI governance. Unlike many existing soft-law initiatives, the Convention seeks to create legally relevant obligations concerning human rights protection and democratic accountability. However, its institutional architecture remains primarily intergovernmental and does not fully address the administrative coordination challenges generated by rapidly evolving AI systems operating across borders.

The coexistence of multiple governance regimes has produced overlapping regulatory requirements, inconsistent compliance obligations, and divergent accountability standards. AI developers frequently encounter varying definitions of transparency, fairness, risk assessment, and human oversight across different jurisdictions. Consequently, regulatory fragmentation creates governance gaps in areas where no single institution possesses sufficient authority to ensure effective oversight of transnational AI activities (Büthe et al., 2022; Schmitt, 2022). These developments demonstrate that the primary challenge facing contemporary AI governance is no longer the absence of regulatory initiatives but rather the absence of a coherent governance architecture capable of coordinating those initiatives across jurisdictions.

The findings indicate that regulatory fragmentation is not merely a legal inconsistency problem; it represents a structural governance challenge that undermines accountability, transparency, and legitimacy in the administration of AI systems. Existing governance arrangements remain institutionally fragmented, creating significant obstacles to effective oversight of AI systems whose operational effects transcend territorial boundaries.

The Limits of Existing AI Governance Models

The emergence of AI governance has generated several influential governance models, including ethics-based governance, risk-based regulation, digital constitutionalism, and algorithmic accountability frameworks. Although each model contributes valuable insights, none provides a comprehensive solution to the governance challenges posed by cross-border AI systems.

Ethics-based governance represents one of the earliest and most widespread approaches to AI regulation. This model emphasizes principles such as fairness, transparency, accountability, non-maleficence, and human autonomy (Floridi & Cowls, 2022; Cath, 2021). Numerous international organizations, governments, and technology companies have adopted ethical principles as the foundation of their AI governance strategies. However, scholars increasingly argue that ethical principles alone cannot guarantee effective governance because they often lack enforceable institutional mechanisms and legal accountability structures (Mittelstadt, 2021). As a result, ethics-based governance frequently produces normative aspirations without corresponding implementation mechanisms.

Risk-based governance, exemplified by the EU AI Act, seeks to overcome these limitations by establishing differentiated regulatory obligations based on the level of risk posed by AI systems. This approach has significantly advanced regulatory sophistication by introducing ex ante compliance

obligations, conformity assessments, and monitoring requirements (Edwards, 2022; Ebers, 2021). Nevertheless, risk-based regulation remains primarily jurisdiction-specific and struggles to address accountability issues arising from transnational AI systems operating across multiple regulatory environments. The effectiveness of risk-based governance therefore diminishes when governance responsibilities become dispersed among different jurisdictions.

Digital constitutionalism offers another influential framework by emphasizing the protection of fundamental rights within digital environments. Scholars argue that constitutional values such as human dignity, due process, equality, and democratic accountability must remain central to the governance of digital technologies (De Gregorio, 2022; Nemitz, 2022; Pollicino, 2021). This approach provides an important normative foundation for safeguarding individual rights against algorithmic harms. However, digital constitutionalism primarily focuses on substantive rights protection rather than the administrative structures necessary to coordinate governance across multiple jurisdictions.

Similarly, algorithmic accountability frameworks have contributed significantly to debates concerning explainability, transparency, auditing, and oversight (Meijer & Grimmelikhuijsen, 2021; Mökander et al., 2023; Wachter et al., 2021). These frameworks identify mechanisms through which AI systems can be evaluated and monitored. Yet most accountability models concentrate on organizational compliance and technical governance rather than the broader institutional arrangements required for transnational administrative coordination.

The comparative analysis reveals a common limitation across these governance models. Existing approaches focus predominantly on normative principles, technical safeguards, or jurisdiction-specific regulation while paying insufficient attention to the administrative architecture necessary for governing AI systems that operate across borders. Consequently, the literature lacks a governance model capable of integrating accountability, transparency, participation, reviewability, and oversight into a coherent transnational administrative framework.

This limitation suggests the need for a different analytical perspective. Rather than focusing exclusively on ethics, rights, or regulatory compliance, AI governance must also address the institutional question of how governance authority can be coordinated across jurisdictions. In this regard, Global Administrative Law offers a promising framework for reconstructing AI governance beyond the constraints of territorial regulation.

Reconstructing Global Administrative Law for AI Governance

The limitations of existing AI governance models suggest that contemporary regulatory debates have focused predominantly on substantive norms while paying comparatively less attention to administrative structures capable of ensuring accountability across jurisdictions. This gap becomes particularly problematic in the context of cross-border AI systems, where regulatory authority, technical development, data processing, and societal impacts are frequently distributed among multiple actors operating under different legal regimes. Consequently, effective AI governance requires not only normative principles but also institutional mechanisms capable of coordinating decision-making, oversight, and accountability at the transnational level.

Global Administrative Law (GAL) offers a valuable framework for addressing this challenge. Originally developed to explain the emergence of administrative governance beyond the state, GAL examines how principles traditionally associated with domestic administrative law have increasingly become relevant within global regulatory regimes (Kingsbury et al., 2005; Krisch & Kingsbury, 2006). Rather than focusing exclusively on formal state authority, GAL recognizes that contemporary governance frequently involves international organizations, regulatory networks, private standard-setting bodies, and hybrid governance arrangements. The central objective of GAL is to ensure that the exercise of public power, regardless of its institutional location, remains subject to principles of legality, transparency, participation, accountability, and review.

The relevance of GAL to AI governance arises from the increasingly transnational character of algorithmic decision-making. Foundation models, generative AI systems, cloud-based infrastructures, and large-scale data ecosystems rarely operate within a single jurisdiction. AI systems may be developed in one country, trained using datasets collected from multiple jurisdictions, deployed through global digital platforms, and produce legal or social consequences in entirely different regulatory environments. Under

such conditions, traditional state-centric regulatory approaches face significant limitations because no single jurisdiction possesses comprehensive authority over the entire lifecycle of AI systems.

The first principle of GAL relevant to AI governance is transparency. Administrative legitimacy depends upon the ability of affected actors to understand how decisions are made and implemented. In the AI context, transparency extends beyond disclosure obligations and requires meaningful access to information regarding model capabilities, training data governance, risk assessment procedures, and decision-making processes (Ananny & Crawford, 2020). Existing governance frameworks frequently recognize transparency as a normative principle but provide limited guidance regarding how transparency obligations should operate across jurisdictions. GAL addresses this limitation by treating transparency as an institutional requirement linked to administrative accountability rather than merely a technical disclosure exercise.

The second principle concerns participation. GAL emphasizes that individuals and stakeholders affected by governance decisions should possess opportunities to participate in decision-making processes. Applied to AI governance, participation requires mechanisms through which governments, civil society organizations, technical experts, industry actors, and affected communities can contribute to the development, monitoring, and evaluation of AI governance arrangements. Such participation is particularly important in transnational contexts where AI systems generate consequences across multiple jurisdictions and social environments.

The third principle is accountability. Contemporary AI governance debates frequently invoke accountability as a desirable objective, yet responsibility often becomes dispersed among developers, deployers, platform operators, and public authorities. GAL contributes by conceptualizing accountability as an institutional relationship requiring clearly identifiable responsibilities, review procedures, and remedial mechanisms (Stewart, 2005). This perspective is particularly relevant for cross-border AI systems where fragmented governance structures often obscure responsibility and hinder effective enforcement.

The fourth principle involves reviewability. Administrative decisions affecting rights and interests must be subject to review by independent institutions capable of evaluating legality, procedural fairness, and substantive justification. In the context of AI governance, reviewability requires mechanisms capable of examining algorithmic decisions, governance practices, and regulatory compliance across institutional and territorial boundaries. Existing governance frameworks rarely provide effective transnational review mechanisms, thereby creating significant accountability deficits.

Finally, GAL emphasizes legality and procedural legitimacy. Governance arrangements derive legitimacy not only from substantive outcomes but also from the procedures through which decisions are made and implemented. For AI governance, procedural legitimacy requires transparent rule-making, inclusive participation, independent oversight, and effective accountability mechanisms. These principles collectively provide a foundation for developing governance arrangements capable of addressing the administrative challenges associated with cross-border AI systems.

The analysis therefore demonstrates that Global Administrative Law offers more than a descriptive account of transnational governance. It provides a normative and institutional framework capable of addressing deficiencies within existing AI governance models. By integrating transparency, participation, accountability, reviewability, and legality into governance design, GAL creates the foundation for a more coherent and interoperable approach to governing cross-border AI systems.

Developing the Global Administrative AI Governance Framework (GAIGF)

Building upon the principles of Global Administrative Law and the findings of the preceding analysis, this article proposes a Global Administrative AI Governance Framework (GAIGF) as a governance model designed to address regulatory fragmentation in cross-border AI systems. The framework does not seek to replace existing regulatory regimes. Instead, it functions as an administrative coordination architecture capable of enhancing interoperability among diverse governance systems while preserving regulatory autonomy at national and regional levels.

The framework consists of five interrelated governance pillars: Global Transparency, Cross-Border Accountability, Transnational Auditability, Multi-Stakeholder Administrative Review, and Global Administrative Oversight. Together, these pillars establish an integrated governance structure capable of coordinating AI governance across jurisdictions.

1. Global Transparency Mechanism

The first pillar concerns global transparency. Existing transparency requirements vary significantly among governance frameworks, producing inconsistent disclosure standards and compliance obligations. The proposed framework establishes a common administrative transparency layer requiring AI developers and deployers to provide standardized information regarding model architecture, risk classification, governance procedures, intended use, and significant system limitations. Such transparency mechanisms facilitate regulatory cooperation and improve the ability of oversight institutions to evaluate AI-related risks across jurisdictions.

Importantly, transparency under GAIGF is conceived as administrative transparency rather than purely technical transparency. The objective is not merely to disclose technical information but to ensure that governance decisions affecting individuals and communities remain understandable, contestable, and subject to scrutiny.

2. Cross-Border Accountability Mechanism

The second pillar addresses accountability. Current governance arrangements often struggle to identify responsible actors when AI systems generate harms across jurisdictions. Responsibility may be distributed among developers, data providers, cloud service operators, deployers, and public institutions. This fragmentation creates substantial enforcement challenges.

GAIGF introduces a cross-border accountability mechanism based on responsibility mapping throughout the AI lifecycle. Under this approach, governance responsibilities are allocated according to functional roles and decision-making authority rather than territorial location alone. Such a mechanism enhances regulatory clarity and reduces accountability gaps that frequently emerge in transnational governance environments.

3. Transnational AI Audit System

The third pillar focuses on auditability. Recent scholarship increasingly recognizes independent auditing as an essential component of trustworthy AI governance (Mökander et al., 2023). However, existing auditing practices remain fragmented and frequently lack international coordination.

GAIGF therefore proposes a transnational auditing framework that promotes common auditing standards, mutual recognition procedures, and cross-jurisdictional cooperation among oversight authorities. Auditing under this framework extends beyond technical performance assessment and includes evaluation of governance practices, risk management procedures, transparency obligations, and compliance with administrative accountability standards.

4. Multi-Stakeholder Administrative Review

The fourth pillar establishes mechanisms for multi-stakeholder administrative review. AI governance increasingly affects a broad range of stakeholders, including governments, businesses, civil society organizations, researchers, and affected communities. Nevertheless, many governance arrangements continue to rely primarily on state-centric decision-making structures.

GAIGF introduces institutional review processes that incorporate participation from diverse stakeholder groups. Such participation strengthens governance legitimacy, improves information quality, and enhances the responsiveness of regulatory institutions to emerging technological developments. Consistent with GAL principles, stakeholder participation is treated as a procedural requirement for legitimate governance rather than merely a consultative practice.

5. Global Administrative Oversight Network

The fifth pillar concerns institutional oversight. Current AI governance initiatives often operate independently, resulting in duplication, inconsistency, and regulatory competition. To address these challenges, GAIGF proposes a Global Administrative Oversight Network linking existing international and regional institutions.

Rather than creating a centralized global regulator, the framework promotes coordination among organizations such as the OECD, UNESCO, the Council of Europe, United Nations agencies, regional regulatory authorities, and national supervisory bodies. This networked model reflects contemporary realities of global governance while avoiding the political and legal obstacles associated with establishing a single supranational authority.

Theoretical and Practical Implications of GAIGF

The proposed framework generates several important theoretical implications. First, it extends Global Administrative Law into a domain that has received limited attention within traditional GAL scholarship. Second, it integrates previously fragmented literatures on digital constitutionalism, regulatory governance, and algorithmic accountability into a unified analytical framework. Third, it demonstrates that administrative legitimacy remains a central concern in the governance of emerging technologies operating beyond state boundaries.

The framework also generates practical implications for policymakers and regulatory institutions. By promoting interoperability rather than harmonization, GAIGF offers a realistic governance strategy capable of accommodating legal diversity while improving regulatory coordination. Such an approach is particularly important in a geopolitical environment characterized by competing regulatory models and divergent governance priorities. Consequently, the framework provides a feasible pathway toward more coherent, accountable, and effective governance of cross-border artificial intelligence systems.

CONCLUSION

This article has examined the growing problem of regulatory fragmentation in the governance of cross-border artificial intelligence systems and its implications for accountability, transparency, and institutional legitimacy. The analysis demonstrates that contemporary AI governance is increasingly characterized by the coexistence of multiple regulatory regimes, including the European Union AI Act, OECD AI Principles, UNESCO recommendations, Council of Europe initiatives, and various national governance frameworks. Although these initiatives have contributed significantly to the development of AI governance, they remain institutionally fragmented and insufficiently coordinated to address the transnational nature of contemporary AI systems. The findings further reveal that existing approaches based on AI ethics, risk-based regulation, digital constitutionalism, and algorithmic accountability provide important normative guidance but do not offer an integrated administrative architecture capable of coordinating governance across jurisdictions. Consequently, the principal challenge facing global AI governance is not the absence of regulatory frameworks but the absence of mechanisms capable of ensuring effective administrative coordination, accountability, and oversight beyond territorial boundaries.

In response to this challenge, the article develops the Global Administrative AI Governance Framework (GAIGF) by integrating principles derived from Global Administrative Law, Regulatory Governance Theory, Digital Constitutionalism, and Algorithmic Accountability scholarship. The framework contributes to the literature in three important respects. First, it extends Global Administrative Law into the field of artificial intelligence governance and demonstrates the continuing relevance of administrative law principles in regulating emerging technologies. Second, it bridges previously disconnected scholarly debates concerning AI regulation, digital constitutionalism, and transnational governance. Third, it proposes a practical governance architecture built upon five interrelated pillars: global transparency, cross-border accountability, transnational auditability, multi-stakeholder administrative review, and global administrative oversight. Collectively, these mechanisms provide a pathway toward greater regulatory interoperability while preserving legal diversity among jurisdictions. The framework therefore contributes both to theoretical debates on global governance and to policy discussions concerning the future regulation of artificial intelligence.

This study is subject to certain limitations. As a normative socio-legal analysis, the article focuses primarily on institutional design and legal principles rather than empirical evaluation of governance outcomes. Future research should therefore examine the practical implementation of the proposed framework through comparative case studies, empirical assessments of regulatory cooperation, and analyses of emerging governance arrangements involving foundation models and generative AI systems. Such research would further strengthen understanding of how administrative governance mechanisms can be operationalized within an increasingly complex and interconnected global AI ecosystem.

GENERATIVE AI USAGE STATEMENT

The authors declare that generative artificial intelligence (AI) tools were used solely for language refinement, grammar improvement, and editorial assistance during the preparation of this manuscript. No

generative AI system was used to generate research questions, formulate scholarly arguments, conduct literature reviews, collect data, analyze data, interpret findings, or develop the conclusions presented in this article. All intellectual content, including the conceptual framework, legal analysis, argumentation, interpretation of sources, and final conclusions, was independently developed, reviewed, and validated by the authors.

All outputs generated with AI-assisted technologies were carefully examined, revised, and verified under human supervision to ensure accuracy, originality, academic integrity, and compliance with applicable ethical and publication standards. The authors accept full responsibility for the content of this manuscript, including its arguments, citations, references, interpretations, and overall scholarly quality. Generative AI tools have not been listed as authors or contributors to this work.

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