



Searching the Horizon of AI Regulation

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Abstract. The rapid integration of Artificial Intelligence (AI) in the media landscape has precipitated a global regulatory challenge, as traditional media laws struggle to address the complexities of algorithmic content creation, automated journalism, and AI-driven audience engagement. This comparative study examines the divergent regulatory approaches adopted by eight major jurisdictions, the European Union, the United States, the United Kingdom, Canada, China, Japan, Singapore, Australia, India, and Indonesia, in governing AI applications within media contexts. Employing a regulatory governance theoretical framework, this research analyzes how different countries balance innovation promotion with the proper protection, legal certainty with adaptive flexibility, and national sovereignty with international coordination. Conducted comparative analysis approach for the legislation framework, this study reveals three dominant regulatory paradigms: rights-based approach emphasizing precautionary principles, market-driven model which prioritizes voluntary compliance and minimal government intervention, and state-controlled framework which focuses on social stability and national security. This study also identifies significant challenges posed by regulatory fragmentation, including compliance complexities for multinational media organizations, potential regulatory arbitrage, and the extraterritorial effects of a comprehensive framework. The research contributes to technology governance literature by providing a diverse perspective of AI regulation's media implications and offering practical insight to navigating the tension between fostering technological innovation and protecting democratic values in an increasingly AI-mediated information ecosystem.

Keywords: AI regulation, comparative governance, technology policy, regulatory frameworks, media freedom

1 Introduction

The media landscape has fundamentally transformed information production, distribution, and consumption, creating unprecedented challenges for the regulatory framework worldwide (Walter, 2024; Kumar, Verma, & Mirza, 2024). As AI systems increasingly influence editorial decision-making, content creation, and audience engagement through algorithmic curation and automated journalism, traditional media regulations find themselves inadequately equipped to address the complex interplay between technological innovation and fundamental rights such as freedom of expression, freedom of speech, and privacy (Diakopoulous & Koliska, 2017; Moller, 2024; Jang, Kwak, &

Bucy, 2024). This regulatory gap has prompted governments globally to develop divergent approaches to AI governance, each reflecting distinct institutional values, regulation perspectives, and strategic priorities.

The emergence of AI in media and communication contexts presents a dual-edged phenomenon. While offering enhanced efficiency, personalized content delivery, and data-driven investigative capabilities, it concurrently raises critical concerns regarding misinformation, deepfakes, algorithmic bias, and the consolidation of media power among major technology corporations (Vizoso, Vaz-Alvarez, & Lopez-Garcia, 2021; Gao, Wang, Xie, Hu, & Hu, 2023; Aldoseri, Al-Khalifa, & Hamouda, 2024). These challenges are further exacerbated by the opacity inherent in AI decision-making processes, which threatens to undermine democratic discourse and the diversity of the public sphere (Jungherr, 2023; Cupac, Schopmans, & Tuncer-Ebeturk, 2024). The tension between fostering technological innovation and safeguarding democratic values has become increasingly pronounced as AI systems grow more sophisticated and pervasive within the media, especially newsrooms and content distribution platforms.

Regulatory responses to the challenges of digital technologies and AI differ widely across countries, highlighting fundamental differences in how various societies view the roles of government, market, and individual rights in the digital age. For example, in the European Union, regulatory frameworks like the AI Act and the Digital Services Act focus on protecting individual rights and ensuring ethical standards (Andrasko, Mesarcik, & Hamulak, 2021; Bolgouras, et al., 2025). These regulations emphasize a precautionary approach that prioritizes human dignity and aims to prevent potential harm from digital technologies. That means the EU's commitment to creating a safe and accountable digital environment for its citizens. In contrast, the United States takes a more market-driven approach, characterized by minimal federal regulation. The US's perspective heavily believes that market forces can effectively address the complexities of technology and consumer protection (Thorun & Diels, 2020; Booth, 2025). The distinction between those countries portrays a unique perspective on how to balance the roles of government, market dynamics, and individual rights in the face of technological transformation.

The disparities in regulatory approaches are not confined to the European Union and the United States. They are also evident across numerous countries with divergent perspectives and priorities. This variation in regulatory frameworks has resulted in a complex global landscape, wherein media organizations are compelled to navigate a myriad of sometimes conflicting legal requirements based on their operational scope and target demographics (Shandilya, Datta, Kartik, & Nagar, 2024; Kim & Ahn, 2024). Furthermore, the distinction of perspective is also connected to the establishment of a global standard, which also influences national preference for regulation. When drafting regulations related to human rights, the Universal Declaration of Human Rights serves as a reference. Meanwhile, the regulatory framework for AI and technological development has recently been lacking. Consequently, the absence of harmonized international regulations raises significant concerns regarding regulatory arbitrage.

The academic literature surrounding AI regulation has progressively acknowledged the imperative for comparative analyses of various regulatory frameworks to assess

their efficacy in reconciling the promotion of innovation with the safeguarding of individual rights (Lescrauwaet, Wagner, Yoon, & Shukla, 2022; Rajendra & Thuraisingam, 2025). Nevertheless, prevailing studies have predominantly concentrated on the technical or economic facets of AI governance, largely neglecting the nuanced implications for media organizations and the overarching principles of democratic governance (Kuziemski & Misuraca, 2020; Walter, 2024; Badawy, 2025). This research deficiency is especially salient in the light of the critical role that the media sector plays in democratic societies, where it is endowed with distinctive constitutional protections that uphold media freedom and freedom of expression. Addressing this gap is essential for understanding how different regulatory approaches may impact the media's function and the broader democratic landscape.

Furthermore, the rapid evolution of AI technologies, particularly in the realm of generative AI systems, has significantly outpaced the development of regulatory frameworks across numerous jurisdictions. This distinction has engendered legal uncertainties that may impede innovation or leave deleterious applications inadequately governed. The challenge is further exacerbated by the inherently interdisciplinary nature of AI governance, which demands expertise across a spectrum of fields, including technology, law, ethics, and media studies. Such complexity underscores the necessity for a comprehensive theoretical framework capable of AI regulation, while simultaneously offering actionable insights for policymakers, media organizations, and researchers.

In light of this context, the present study adopts a comparative regulatory governance framework to scrutinize the diverse methodologies employed by various countries in regulating AI within media frameworks. This analysis will examine the intricate trade-offs between legal certainty and adaptive flexibility, the promotion of innovation and the safeguarding of rights, as well as the tensions between national sovereignty and international coordination. By systematically comparing regulatory approaches across multiple jurisdictions, this research aspires to enhance both the theoretical understanding of technology governance and the practical development of policies in a globally interconnected yet increasingly fragmented regulatory landscape.

2 Literature Review

The theoretical framework employed in this study posits that AI regulatory approaches are deeply embedded manifestations of underlying institutional characteristics within distinct political economies. This perspective suggests that regulatory convergence across jurisdictions will remain inherently constrained by fundamental divergences in state-market relationships, democratic governance architecture, and deeply-rooted cultural orientations toward technology adoption and individual rights protections. These structural differences create the term 'institutional path dependencies' that shape regulatory choice and limit the potential for harmonized global AI governance frameworks (Ghezzi & Mingione, 2007; Powell, 2024).

Furthermore, to analyze regulatory variations, this research uses the Institutional Logics Approach (ILA), which identifies four primary institutional logics in AI regulations (Skelcher & Smith, 2015; Elloukmani, Raeymaeckers, & oosterlynck, 2025). Market logic prioritizes efficiency, competition, and profit maximization. Countries that apply this logic favor voluntary compliance, industry self-regulation, and flexible

frameworks that don't constrain innovation or competitive dynamics. The following logic was state logic, which emphasizes centralized authority and collective welfare. Jurisdiction in these countries prefers comprehensive government oversight, standardized requirements, and state-led coordination that align with national security and social stability goals. Similar to state logic was professional logic, which focuses on expertise and ethical standards. But, in this logic, authority was delegated to technical experts and specialized bodies, emphasizing evidence-based decisions and professional self-governance. Lastly, community logic focuses on collective responsibility and stakeholder participation. These jurisdictions prioritize multi-stakeholder engagement and consensus-building to protect broader social welfare over individual interest. All of these logics rarely work alone but often compete or blend.

2.1 Regulatory Governance Theory

Regulatory governance theory presents a sophisticated framework for examining how states formulate and implement oversight mechanisms for artificial intelligence (AI) systems. This theoretical construct is increasingly pertinent as the rapid advancement of technology engenders a myriad of ethical, legal, and societal dilemmas. Central to this inquiry are two analytical dimensions, independence versus discretion. The independence versus discretion dimension delineates a continuum of regulatory frameworks, ranging from those exhibiting high independence to those characterized by significant discretion.

The regulatory system, defined by high independence, empowers oversight bodies to function autonomously from governmental influence (Levi-Faur, 2011; T. & Laegreid, 2007; Koop & C., 2017). This form of independence is vital for safeguarding the integrity and impartiality of regulatory processes, particularly in contexts where public welfare may be at stake. Regulatory bodies operating within this paradigm are often protected by legislative mechanisms that curtail executive overreach, thus ensuring that decision-making is insulated from transient political pressures (Levi-Faur, 2011; Eisner, Worsham, & Ringquist, 2000). Such safeguards are instrumental in fostering public confidence, especially in domains like AI, where ethical considerations and potential societal ramifications necessitate vigilant oversight.

In contrast, a regulatory framework characterized by high discretion affords agencies considerable latitude in resource allocation and policy formulation (Brousseau & Regalado, 2021; Schmidt & Scott, 2021). Under this model, regulatory entities benefit from the flexibility to respond promptly to emergent challenges, often with reduced procedural formalities. However, this discretion is typically exercised within a context that remains closely attuned to executive priorities. While this approach can yield a responsive regulatory environment, it may also precipitate concerns regarding accountability and transparency, as the demarcation between regulatory authority and political influence can become obscured. The potential for conflicts of interest is especially pronounced in this framework, particularly when regulatory determinations intersect with governmental agendas.

The balanced approach advocates for a synthesis of independence and discretion, aiming to leverage the strengths of both dimensions in a cohesive governance model (Brousseau & Regalado, 2021; Schmidt & Scott, 2021). This strategy promotes adaptive governance mechanisms that enable regulatory structures to remain resilient and responsive to the dynamic landscape of AI technologies, while simultaneously safe-

guarding robust oversight principles. Techniques such as iterative policymaking, stakeholder engagement, and real-time feedback mechanisms are integral to this balanced methodology, as they foster a regulatory environment that is both effective and attuned to societal imperatives. Notably, such mechanisms address the multifaceted challenges posed by AI, ensuring that governance frameworks evolve in tandem with technological advancements without compromising ethical considerations.

2.2 Basic Concept of Risk Approaches

To conduct a more comprehensive analysis of regulatory frameworks for AI and explore the new horizon in AI regulation, this study examines the risk-based approach adopted by the European Union regulations. Many scholars regard this approach as a pertinent perspective for contemporary AI regulation. Risk-based approach in artificial intelligence (AI) regulation has emerged as a cornerstone of contemporary governance models (Mahler, 2022; Paul, 2023; Ebers, 2025). This concept is particularly relevant in light of growing concerns about the societal and ethical implications of advanced AI systems. Societal implications pertain to the extensive impact that artificial intelligence systems can exert on communities, economies, and the intricate fabric of social relationships (Whittlestone, Nyrop, Alexandrova, Dihal, & Cave, 2019; Khogali & Mekid, 2023). These implications may manifest in both positive and negative ways, influencing individuals and society as a whole in multifaceted and complex ways. Meanwhile, ethical implications concern the principles of right and wrong that guide the design, deployment, and use of AI technologies (Whittlestone, Nyrop, Alexandrova, Dihal, & Cave, 2019; Khogali & Mekid, 2023; Bankins & Formosa, 2023). In this context, a moral perspective emphasizes issues related to fairness, responsibility, and respect for human rights.

A risk-based approach entails formulating regulatory obligations that correspond directly to the potential risks presented by artificial intelligence technologies (Mahler, 2022; Chamberlain, 2023). Instead of imposing uniform requirements across all AI applications, this methodology advocates for differentiated regulatory oversight that aligns with the severity and nature of prospective harm (Naime & Andrey, 2013; Chamberlain, 2023; Ebers, 2025). This nuanced approach not only enhances targeted oversight but also promotes innovation-friendly frameworks that accommodate the diverse landscape of AI applications. Central to the risk-based approach is the process of systematic risk assessment and categorization (Novelli, Casolari, Rotolo, Taddeo, & Floridi, 2024; Chamberlain, 2023). Regulators require stakeholders to identify, analyze, and characterize the various hazards associated with AI systems. This includes considering impacts such as threats to safety, violations of fundamental rights, discrimination, privacy breaches, and societal disruption (Goncalves, 2020; Orwat, Barcis, Folberth, Jahnle, & Wadepful, 2024). Typically, this process leads to the classification of AI systems into distinct risk categories: unacceptable, high, limited, minimal, or no risk (Novelli, Casolari, Rotolo, Taddeo, & Floridi, 2024). Each category has specific regulatory requirements that become more stringent as the potential severity and likelihood of harm increase.

A defining characteristic of risk-based approach regulation is its emphasis on proportionality and flexibility (Meacham, 2010; Mahler, 2022). Regulatory burdens are meticulously calibrated to ensure that robust governance mechanisms are primarily imposed on high-risk applications, such as those encountered in healthcare, law enforcement, or critical infrastructure sectors (Truby, Brown, Ibrahim, & Parellada, 2022; Cha,

2025). Conversely, low-risk systems are often subject to comparatively lighter or negligible regulatory obligations (Truby, Brown, Ibrahim, & Parellada, 2022; Orwat, Barcis, Folberth, Jahnel, & Wadephul, 2024). This differentiation serves to avert overregulation, thereby fostering an environment conducive to ongoing innovation while simultaneously ensuring that safeguards are appropriately aligned with the severity of potential adverse outcomes. Risk management systems constitute another foundational pillar of this framework. Organizations engaged in the development or deployment of high-risk AI systems are mandated to establish comprehensive policies and ongoing processes designed to manage risks throughout the AI lifecycle (Truby, Brown, Ibrahim, & Parellada, 2022; Novelli, Casolari, Rotolo, Taddeo, & Floridi, 2024). This includes continuous risk identification and the development of effective mitigation strategies, post-market monitoring, and the regular updating of system controls in response to evolving evidence and technological advancements. Such requirements promote a culture of accountability, transparency, and adaptability in the face of rapidly advancing AI capabilities.

The risk-based approach further integrates broader principles, such as continuous monitoring, transparent impact assessments, and interdisciplinary collaboration. These principles acknowledge that many AI-related risks are novel, multifaceted, and often challenging to predict, necessitating governance models that can evolve dynamically over time and respond effectively to feedback from a diverse array of stakeholders.

2.3 Risk Assessment and Categorization in AI Regulation

A fundamental component of a risk-based approach to AI regulation is the risk assessment process, which involves systematically identifying, analyzing, and evaluating potential adverse outcomes associated with the deployment of AI systems (Kaminski, 2023; Novelli, Casolari, Rotolo, Taddeo, & Floridi, 2024). This evaluation goes beyond technical performance metrics to encompass a broad range of risks, including safety hazards, algorithmic bias and discrimination, threats to fairness and transparency, privacy violations, and infringements on fundamental rights. Effectively conducting risk assessments requires a multidisciplinary perspective, integrating insights from technical experts, ethicists, legal scholars, and affected stakeholders to comprehensively understand how an AI system may cause harm in both direct and indirect ways. Importantly, risk assessment is not a one-time task but an ongoing activity throughout the AI system lifecycle, ensuring that emerging risks are detected and addressed proactively.

Following risk assessment, AI systems are then classified into distinct categories based on the magnitude and likelihood of the risks they pose. The categorization of risk level is essential in establishing the appropriate level of regulatory scrutiny and compliance requirements that should be applied to various AI applications. The proposed AI Act of the European Union serves as a salient example of this regulatory framework, delineating four primary categories of AI systems (Musch, Borrelli, & Kerrigan, 2023; Laux, Wachter, & Mittelstadt, 2024; Segate & Daly, 2024).

First, AI systems classified as presenting an unacceptable risk are prohibited outright. Examples of such systems include social scoring mechanisms implemented by public authorities, which have the potential to undermine fundamental rights and democratic processes.

Second, high-risk AI systems are subject to rigorous regulatory obligations, which encompass stringent conformity assessments, mandatory transparency measures, and

robust risk management protocols. An instance of high-risk AI technologies encompasses those utilized in critical infrastructure, healthcare diagnostics, and biometric identification.

The third category, limited-risk, encompasses AI applications that are subject to lighter regulatory oversight. These applications are primarily required to fulfill transparency obligations, thereby informing users about the nature of their interactions with AI, such as the disclosure of chatbot usage or the presence of synthetic media like deep-fakes. Such measures are designed to protect users from potential deception or misuse while avoiding the imposition of excessive compliance costs.

Lastly, minimal or no-risk AI systems are effectively unregulated within this framework. These systems are considered unlikely to pose significant harm, thereby allowing innovation and deployment to progress with minimal regulatory intervention.

This tiered structure ensured proportionality, focusing regulatory efforts and resources where harms are likely to be most significant. Beyond mere risk identification, impact assessments evaluate the broader effects of AI systems on stakeholders, including users, society, and the environment. These assessments involve reviewing governance, system performance, the communication of risks, and threats to safety and security.

3 Research Method

The research design follows established protocols for comparative legal and policy analysis to capture the complexity of regulatory approaches while maintaining analytical rigor. This study employs a comparative study with a content analysis approach combined with systematic desk study methods to examine the AI regulatory framework across ten countries or jurisdictions, namely: the European Union, the United States, the United Kingdom, Canada, China, Japan, Singapore, Australia, India, and Indonesia. Those countries or jurisdictions were chosen with several considerations, ultimately representing diverse regulatory approaches, economic systems, media development, and regulation traditions. Selection criteria included: (1) significant influence in global AI development and deployment; (2) availability of comprehensive regulatory documentation; and (3) variation in regulatory approach.

Primary sources comprised official government documents about AI from each country or jurisdiction. Document selection criteria followed the established policy document analysis protocols, such as official documents status and legal authority, relevance to AI regulation in media contexts, accessibility in English or with reliable translations, and comprehensive coverage of the regulatory framework and implementation mechanism. Meanwhile, secondary sources, which are included in the desk study, were collected from academic analyses, think tank reports, industry assessments, and comparative studies from scholarly journals.

The comparative analysis in this research follows systematic procedures designed by the researcher to identify each aspect of the regulatory framework. First, the researcher identifies standard features across the regulations with similar outcomes. Then, the researcher distinguishes factors in the regulations with a different approach, such as the institutional logic approach, the regulatory framework approach, and risk-based

consideration. The last one conducted cross-pattern analysis to identify a configurational pattern in each regulation scope. Methodological triangulation was achieved through multiple data sources and analytical approaches.

4 Results

The comparative analysis across ten jurisdictions reveals three distinct regulatory paradigms that reflect fundamental differences in institutional logic and governance philosophies. First, state-centric approaches prioritize national strategic and centralized control mechanisms. Second, a market-oriented approach seeks to prioritize innovation promotion and voluntary compliance mechanisms over comprehensive regulatory intervention. Third, a hybrid and transitional approach, each attempting to balance competing institutional logics through innovative regulatory designs. This finding portrays that regulatory convergence, specifically AI regulation, remains structurally constrained by fundamental differences in state-market relationships, democratic governance models, and cultural values regarding technology and people's rights.

Table 1. Findings

Country	Regulation Approach	Institutional Logic	Government Model	Risk Framework
China	Centralized	State Logic	High Discretion	Political Risk
Japan	Agile Government	Professional Logic	Balance Independence	Human Centric Risk
India	Pragmatic Innovation Driven	Market Logic	Flexible Framework	Sectoral Risk
United States	Flexible and Democratic	Market Logic	High Discretion	Market-based Risk
United Kingdom	Light-Touch	Market Logic	Balance Independence	Adaptive Risk
Canada	Federal Legitimation	Professional Logic	High Independence	High-risk System
European Union	Comprehensive Perspective	Professional Logic	High Independence	Four Tier Risk
Australia	Risk-Based Approach	Professional Logic	High Independence	Ten Mandatory Risk
Singapore	Soft Law	Community Logic	Balance Independence	Industry Specific Risk
Indonesia	Strategic Development	State Logic	High Discretion	National Development

4.1 State-Centric Approach

China. China has embraced a centralized and state-driven paradigm in its approach to AI regulation, strategically intertwining it with concerns related to cybersecurity, data protection, and national security. Since 2021, the Chinese government has implemented a comprehensive array of technical regulations that address significant issues such as recommendation algorithms, deepfakes, and generative AI. These regulatory initiatives are not merely administrative measures. They also reflect a broader vision aimed at safeguarding political stability, maintaining stringent control over information, and ensuring social security. Through this objective, the Chinese authorities aspire to create an environment that nurtures AI innovation while simultaneously enacting rigorous oversight to mitigate potential risk. These perspectives portray that China seeks to achieve in harnessing the transformative potential of AI technology within a framework that preserves state interests and societal order. In this context, China also manifested how a nation can navigate the complexities of technological advancement while adhering to its sociopolitical realities and aspirations.

Indonesia. For AI governance, Indonesia employs a strategic, development-oriented framework, underscoring its commitment to national digital transformation and objectives for economic growth. The country has instituted the National AI Strategy (Stranas KA) for the period 2020-2045, orchestrated by the Agency of Assessment and Application of Technology (BRIN). Recently, Indonesia has operated without dedicated legislation specific to AI, relying instead on a series of existing regulations, including the Electronic Information and Transaction Law, the Personal Data Protection Law, and various sectoral guidelines. The circular letter issued by the Ministry of Communication and Digital Affairs established ethical guidelines for AI deployment, emphasizing principles of inclusivity, humanity, privacy, transparency, and accountability. Indonesia's regulatory framework prioritizes ethics-based governance, incorporating UNESCO's principles on AI ethics. Noteworthy initiatives encompass the establishment of the AI Innovation Center (PIKA), the National AI Innovation Consortium (KORIKA), and the INA Digital project aimed at unifying government services. This practice demonstrates adaptive governance approaches conducted by Indonesia, which focus on national development objectives and digital sovereignty through coordinated state-led initiatives.

4.2 Market-Oriented Approach

United States (US). The United States has opted for a flexible and decentralized approach to artificial intelligence governance, lacking a unified federal statute specifically addressing AI. Regulatory measures are implemented through voluntary guidelines, executive directives, and industry-specific regulations. The primary goal is to stimulate innovation and support industrial growth while also addressing critical safety, security, and ethical issues through general principles. It can be found in the 2023 Executive Order from the Biden Administration. In practice, this means that the United States embraces a relatively relaxed regulatory environment, working in partnership with industry stakeholders, which contrasts sharply with the more stringent risk-based framework adopted by the European Union.

United Kingdom (UK). A light-touch principle-based approach characterizes the regulatory framework for AI in the United Kingdom (UK). The UK's perspective reflects

a broader commitment to fostering innovation while ensuring that emerging technologies do not compromise public safety or individual rights. Recently, the UK government has not foreseen a comprehensive AI law. Instead, it seeks to implement a flexible regulatory framework that is capable of evolving in response to the emergence of technological development and shifting market dynamics. This approach is designed to maintain a balance between encouraging technological innovation and safeguarding crucial principles such as ethical standards, accountability, and public welfare. Central to this framework are overarching guiding principles that aim to protect consumers and society at large. By prioritizing a responsive regulatory environment, the UK perspective positions itself as a leader in AI development while ensuring that its deployment aligns with the values and expectations of its citizens.

4.3 Hybrid and Transitional Model

Japan. Japan employs an ‘agile governance’ model that embodies a flexible and human-centric approach to policy-making. This model prioritizes adaptability in response to the rapid evolution of technologies, particularly artificial intelligence (AI). Currently, Japan’s regulatory landscape for AI is guided primarily by non-binding guidelines that advocate for voluntary adherence to core principles such as ethics, privacy, safety, and transparency. Rather than implementing a standalone legislative framework for AI, Japan integrates AI oversight within its existing legal structures, including those governing privacy, antitrust, and economic security. This method reflects a pragmatic approach that seeks to balance innovation with the need for regulation. However, recent policy deliberations have sparked discussions about the potential introduction of a dedicated AI law. The prospect has gained traction, especially in relation to the governance of generative AI models, which have raised unique challenges and ethical considerations. As these dialogues evolve, they underscore Japan’s commitment to ensuring that its AI ecosystem not only fosters technological advancement but also upholds essential societal values.

India. India adopts a pragmatic and innovation-driven approach toward the regulation of AI. The current regulatory framework encompasses a suite of policies, ethical guidelines, and strategic documents, notably the responsible AI principles. The primary objective of this framework is to leverage AI technologies to enhance critical sectors, while continuing to ensure the protection of individual privacy and upholding ethical standards as mandated by the Data Protection Act (2023). This regulatory framework stance is a deliberative effort of the Indian government to balance the need for innovation with the necessity of safeguarding societal values. By maintaining a flexible regulatory environment, India aims to stimulate growth and innovation in the AI sector while laying a foundation for future comprehensive regulations. Such an approach not only fosters a vibrant AI ecosystem but also prepares the groundwork for addressing the complex ethical and societal implications associated with AI technologies. This strategic orientation underscores India’s commitment to harnessing AI as a tool for socio-economic advancement while ensuring that ethical considerations remain at the forefront of technological development.

Canada. Recent developments in Canada reveal that the government is actively working on federal legislation known as the Artificial Intelligence and Data Act (AIDA). This legislation is designed primarily to regulate high-risk artificial intelligence systems, recognizing that such technologies pose significant implications for privacy,

safety, and ethical considerations. AIDA's framework reveals gaps that merit attention. Key elements such as implementation strategies, compliance obligations, and precise definitions of high-risk AI systems are still in the development phase. This lack of clarity has led to ongoing debates among policymakers, industry experts, and advocacy groups regarding the adequacy of AIDA in addressing the complexities of AI regulation. Many stakeholders advocate for a more integrated approach, suggesting that AIDA should not only address high-risk systems but also create a holistic regulatory environment that encompasses a broader spectrum of AI technologies. This reflects a growing recognition that AI governance must evolve alongside the rapid advancement in the field, ensuring that regulations remain relevant and practical.

European Union (EU). The European Union has enacted a groundbreaking and all-encompassing regulatory framework known as the AI-act (2024), which represents the world's first legislative endeavor tailored explicitly to the governance of artificial intelligence. This regulation is universally applicable across all member states. It employs a risk-based methodology that categorizes AI applications into several tiers, ranging from minimal risk to outright prohibitions on high-risk applications. The heart of the EU's strategic approach is the commitment to safeguarding fundamental human rights, ensuring public safety, preserving individual privacy, and addressing ethical considerations inherent to the deployment of AI technologies. Simultaneously, this regulatory framework seeks to stimulate innovation within the sector, thereby fostering an environment conducive to technological advancement and economic growth. The EU's initiative is poised to establish a global benchmark for excellence in AI governance, reflecting a synthesis of regulatory rigor and an ethos of responsible innovation. By prioritizing a human-centric approach to technology regulation, the EU endeavors not only to mitigate potential risks associated with AI but also to cultivate a sustainable, ethical, and socially responsible AI landscape.

Australia. Australia's approach to AI regulation embodies a nuanced, risk-based and principles-driven strategy that evolves from previously voluntary guidelines toward the implementation of mandatory requirements for high-risk applications. This regulatory framework was initially informed by the establishment of AI Ethics Principles in 2019, which articulated eight core values, including fairness, transparency, accountability, privacy, and security. In a significant policy shift, the Australian government introduced the voluntary AI Safety Standard in 2024. In the same year, Australia also launched a Proposal Paper that delineates ten mandatory guardrails aimed at governing high-risk AI applications. It encompasses critical domains such as risk management, governance, accountability, testing, human oversight, and transparency. Additionally, the regulatory landscape is marked by sectoral regulation that integrates the existing legal framework and emphasizes stakeholder consultation. Australia's regulatory paradigm seeks to balance the promotion of innovation with effective risk mitigation, thereby reflecting its status as a coordinated market economy characterized by a robust institutional framework. This progressive regulatory landscape positions Australia at the forefront of ethical AI development, balancing economic growth with societal status.

Singapore. Singapore adopts a unique approach to artificial intelligence governance, emphasizing the concept of 'soft law' through the implementation of voluntary guidelines and best practices. This is prominently illustrated by the country's AI governance framework, which serves as a practical resource for the private sector, guiding organizations in the ethical and responsible use of AI technologies. The regulatory landscape

in Singapore is characterized by a sectoral model that assigns the oversight of compliance to industry-specific authorities. This targeted oversight allows for tailored regulations that consider unique challenges and opportunities presented by AI technologies across different fields. In 2024, Singapore made significant advancements in its national AI strategy by incorporating frameworks specifically addressing generative AI. This adaptation reflects a proactive stance toward the evolving nature of AI technologies and a commitment to ensuring their responsible utilization. The government aims to strike a nuanced balance between promoting innovation and addressing ethical considerations and potential security risks associated with AI deployment.

5 Discussion

The result of this research identified a fundamental dichotomy between state-centric and market-oriented institutional logic across jurisdictions. China and Indonesia exemplify pure state logic implementation, where AI regulation serves broader national strategic objectives, including political stability, social control, and economic development goals. In contrast, the United States and the United Kingdom operate primarily under market logic, prioritizing innovation, competitive advantage, and voluntary compliance mechanisms. The US's rejection of comprehensive federal AI legislation in favor of executive orders and industry partnerships reflects deep institutional resistance to state intervention in technological markets. However, this condition also portrays a critical paradox among countries in implementing AI regulatory frameworks. While market logic promotes innovation efficiency, it potentially undermines democratic accountability and public interest protection in AI deployment.

Most striking is the relative absence of professional logic across all the countries. Unlike traditional regulatory domains, AI governance lacks established professional institutions, standardized frameworks, and autonomous regulatory bodies. The EU's AI Act attempts to create professional logic through technical standards and expert committees, but remains embedded within state institutional structures rather than independent professional governance. Meanwhile, Japan's agile governance model represents the closest approximation to professional logic, emphasizing technical expertise and voluntary compliance among industry practitioners. However, this regulatory model remains institutionally weak, lacking the enforcement mechanism and professional sanctions typical of mature professional regulatory systems.

Based on a regulatory governance perspective, most of the jurisdictional scope demonstrates fundamental tension between independent and discretion dilemmas. Indonesia and China's regulatory frameworks offer maximum flexibility, but at the cost of predictability and accountability. Indonesia's reliance on ministerial circular letters and task forces shows institutional improvisation rather than systematic governance design. That means, Indonesia practically demonstrates a high discretion model in AI's framework. This condition is opposite to Australia, which is identified as a highly independent model. Australia's transition from voluntary to mandatory frameworks represents institutional learning, but the ten-guardrail approach may create compliance complexity without commensurate effectiveness gains. Meanwhile, Japan, Singapore,

and the UK attempt to balance independence with discretion through adaptive institutional designs. However, this creates accountability ambiguity, as when voluntary guidelines fail, there are unclear escalation pathways to mandatory enforcement. The UK's rejection of comprehensive AI legislation while maintaining light-touch principles exemplifies this institutional uncertainty.

The widespread adoption of 'risk-based' framework jurisdictions masks fundamental conceptual disagreement about risk definition, assessment, and management. The AI Act's four-tier risk classification appears technically rigorous but embeds European cultural values about acceptable risk levels. This prohibition of social scoring systems reflects EU democratic values but may limit beneficial applications in other cultural contexts. Chinese regulations prioritize systemic political risks over individual privacy or economic efficiency concerns. This represents a fundamentally different risk ontology from Western liberal democratic approaches, creating inevitable international regulatory conflict. The US approach implicitly accepts higher individual and social risk in exchange for innovation benefits and market competitiveness. This reflects institutional confidence in market-based correction mechanisms and litigation-based ex-post remedies rather than ex-ante regulatory prevention.

Regarding those issues, most countries lack credible enforcement for AI regulation. Voluntary guidelines without sanction create regulatory theater rather than substantive governance. AI governance across all jurisdictions suffers from technocratic capture, policy development dominated by industry experts, government technologists, and academic specialists. Meaningful democratic participation in AI governance remains institutionally underdeveloped, even in established democracies.

From the explanation among those countries, this research also found that institutional logic theory requires extension to address technological governance contexts. Traditional logic proves inadequate for analyzing AI regulation because they developed in pre-digital institutional environments. A fifth logic, 'technological logic,' may be emerging, prioritizing algorithmic efficiency, data optimization, and computational rationality over traditional institutional values. This logic appears to transcend jurisdictional boundaries and may explain the limited effectiveness of conventional regulatory approaches across all countries examined.

6 Conclusion

This research elaborates that regulatory approaches to artificial intelligence (AI) are profoundly influenced by entrenched institutional dichotomies, which hinder the potential for meaningful convergence. The inherent division between state-centric paradigms, exemplified by nations such as China and Indonesia, where national strategic objectives and sociopolitical control are paramount, and market-oriented frameworks, as seen in the United States and the United Kingdom, prioritizing innovation and voluntary compliance, gives rise to incompatible regulatory ontologies. Notably, all countries or jurisdictions for AI examined a glaring absence of professional regulatory frameworks, manifesting a dearth of established institutions, standardized guidelines,

and autonomous regulatory bodies that are emblematic of a mature regulatory environment. Furthermore, the enforcement mechanisms across all countries appear insufficient, leading to the phenomenon of ‘regulatory theater’ rather than fostering substantive governance. The prevalent adoption of risk-based regulatory frameworks conceals fundamental disagreement regarding the ontology of risk itself. These divergent interpretations create significant barriers to international regulatory coordination, rendering collaborative efforts particularly challenging in an increasingly complex global landscape.

In addition, the evolving regulatory landscape indicates that traditional institutional frameworks necessitate a fundamental reevaluation to navigate the complexities of technological governance effectively. An emerging technological logic appears to prioritize algorithmic efficiency and computational rationality at the expense of established democratic principles. This technological logic transcends national and jurisdictional boundaries, elucidating the ineffectiveness of conventional regulatory mechanisms across the countries examined. Future governance of AI is anticipated to shift towards managed institutional diversity rather than a singular convergence, characterized by adaptive frameworks that seek to balance independence with discretionary powers. However, this approach is fraught with challenges, including enduring democratic deficits and the risk of technocratic capture. The paramount challenges lie not in the harmonization of disparate institutional approaches but in the development of hybrid governance mechanisms that acknowledge and address the global public good attributes of AI while respecting fundamental cultural and political differences. Failure to confront the systemic exclusion of meaningful democratic participation, along with the absence of a robust professional regulatory framework, will perpetuate legitimacy deficits in AI governance, irrespective of advancements in technical sophistication.

Author’s Biography

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References

- Aldoseri, A., Al-Khalifa, K., & Hamouda, A. (2024). AI-Powered Innovation in Digital Transformation: Key Pillars and Industry Impact. *Sustainability*, doi.org/10.3390/su16051790.
- Andrasko, J., Mesarcik, M., & Hamulak, O. (2021). The Regulatory Intersections Between Artificial Intelligence, Data Protection and Cyber Security: Challenges and Opportunities for the EU Legal Framework. *AI & Society*, 36, 623-636.
- Badawy, W. (2025). Algorithmic Sovereignty and Democratic Resilience: Rethinking AI Governance in the Age of Generative AI. *AI and Ethics*, <https://doi.org/10.1007/s43681-025-00739-z>.
- Bankins, S., & Formosa, P. (2023). The Ethical Implications of Artificial Intelligence (AI) For Meaningful Work. *Journal of Business Ethics*, 185, 725-740.

- BBC. (2018, October 10). BBC. Retrieved from BBC Website: <https://www.bbc.com/news/technology-45809919>
- Bolgouras, V., Zarras, A., Leka, C., Stylianou, I., Farao, A., & Xenakis, C. (2025). EU Regulatory Ecosystem for Ethical AI. AI and Ethics, <https://doi.org/10.1007/s43681-025-00749-x>.
- Booth, S. (2025). Position: Strong Consumer Protection in an Inalienable Defense for AI Safety in the United States. International Conference on Machine Learning (pp. 1-12). Vancouver Canada: PMLR267.
- Brousseau, E., & Regalado, C. (2021). Comparative Analysis of Regulatory Governance Regimes in the OECD. SIOE 2021 (p. <https://papers.sioe.org/paper/2938.html>). online : SIOE: Society for Institutional & Organizational Economics.
- Cha, S. (2025). Policy Mix Framework for AI Regulation: A Game-Theoretic Analysis of Risk-Based Direct Regulation and Standardization Approaches. Information Development, <https://doi.org/10.1177/02666669251352455>.
- Chamberlain, J. (2023). The Risk-Based Approach of the European Union's Proposed Artificial Intelligence Regulation: Some Comments from a Tort Law Perspective. European Journal of Risk Regulation, 14, 1-13.
- Cupac, J., Schopmans, H., & Tuncer-Ebeturk, I. (2024). Democratization in the Age of Artificial Intelligence: Introduction to the Special Issue. Democratization, 899-921.
- Dastin, J. (2018, October 11). Reuters. Retrieved from Reuters Website : <https://www.reuters.com/article/world/insight-amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK0AG/>
- Diakopoulous, D., & Koliska, M. (2017). Algorithmic Transparency in The News Media. Digital Journalism, 5(7), 809-828.
- Ebers, M. (2025). Truly Risk-Based Regulation of Artificial Intelligence How to Implement the EU's AI Act. European Journal of Risk Regulation, 16, 684-703.
- Eisner, M., Worsham, J., & Ringquist, E. (2000). Contemporary Regulatory Policy . Colorado : Lynne Reinner Publishers, Inc.
- Elloukmani, S., Raeymaeckers, P., & oosterlynck, S. (2025). Understanding Diversity in Non-profit Organizations: An Institutional Logics Perspective. Human Service Organizations: Management, Leadership, & Governance, 49(3), 291-312.
- EU. (2022). Bias in Algorithms: Artificial Intelligence and Discrimination. Vienna: FRA: European Union Agency for Fundamental Rights.
- Gao, B., Wang, Y., Xie, H., Hu, Y., & Hu, Y. (2023). Artificial Intelligence in Advertising: Advancements, Challenges, and Ethical Consideration in Targeting, Personalization, Content Creation, and Ad Optimization. Sage Open, 1-20.
- Ghezzi, S., & Mingione, E. (2007). Embeddedness, Path Dependency, and Social Institutions: An Economic Sociology Approach. Current Sociology, 55(1), 11-23.
- Goncalves, M. (2020). The Risk-Based Approach Under the New EU Data Protection Regulation: a Critical Perspective. Journal of Risk Research, 23(2), 139-152.
- Jang, W., Kwak, D., & Bucy, E. (2024). Knowledge of Automated Journalism Moderates Evaluations of Algorithmically Generated News. New Media & Society, 12(10), 5898-5922.
- Jungherr, A. (2023). Artificial Intelligence and Democracy: A Conceptual Framework. Social Media + Society, 1-14.
- Kaminski, M. (2023). Regulating The Risks of AI. Boston University Law Review, 103, 1347-1411.
- Khogali, H., & Mekid, S. (2023). The Blended Future of Automation and AI: Examining Some Long-term Societal and Ethical Impact Features. Technology in Society, 1-12.
- Kim, J., & Ahn, S. (2024). The Platform Policy Matrix: Promotion and Regulation. Policy & Internet, 1-19.

- Koop, C., & C., H. (2017). Political Independence, Accountability, and the Quality of Regulatory Decision-Making. *Comparative Political Studies*, 51(1), 38-75.
- Kumar, S., Verma, A., & Mirza, A. (2024). *Digital Transformation, Artificial Intelligence and Society*. New York: Springer.
- Kuziemski, M., & Misuraca, G. (2020). AI Governance in The Public Sector: Three Tales from The Frontiers of Automated Decision-Making in Democratic Settings. *Telecommunication Policy*, 44, 1-13.
- Laux, J., Wachter, S., & Mittelstadt, B. (2024). Trustworthy Artificial Intelligence and the European Union AI Act: On the Conflation of Trustworthiness and Acceptability of Risk. *Regulation & Governance*, 18, 3-32.
- Lescrauwaet, L., Wagner, H., Yoon, C., & Shukla, S. (2022). Adaptive Legal Framework and Economic Dynamics in Emerging Tech-nologies: Navigating the Intersection for Responsible Innovation. *Law and Economics*, 16(3), 202-220.
- Levi-Faur, D. (2011). *Handbook of Political Regulation*. Cheltenham, Northampton: Edward Elgar.
- Mahler, T. (2022). Between Risk Management and Proportionality: The Risk-based Approach in the EU's Artificial Intelligence Act Proposal. *The Swedish Law and Informatics Research Institute*, 1, 247-270.
- Moller, L. (2024). Designing Algorithmic Editors: How Newspapers Embed and Encode Journalistic Values into News Recommender Systems. *Digital Journalism*, 12(7), 926-944.
- Musch, S., Borrelli, M., & Kerrigan, C. (2023, August 23). The EU AI Act: A Comprehensive Regulatory Framework for Ethical AI Development. Retrieved from SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4549248
- Naime, A., & Andrey, J. (2013). Improving Risk-Based Regulatory Processes: Identifying Measures to Pursue Risk-Informed Regulation. *Journal of Risk Research*, 16(9), 1141-1161.
- Nalbandian, L. (2022). An Eye for an "I": A Critical Assessment of Artificial Intelligence Tools in Migration and Asylum Management. *Comparative Migration Studies*, 10(32), 1-23.
- Meacham, B. (2010). Risk-Informed Performance-Based Approach to Building Regulation. *Journal of Risk Research*, 13(7), 877-893.
- Novelli, C., Casolari, F., Rotolo, A., Taddeo, M., & Floridi, L. (2024). AI Risk Assessment: A Scenario-Based, Proportional Methodology for the AI Act. *Digital Society*, 13(3), 12-29.
- Orwat, C., Barcis, J., Folberth, A., Jahnel, J., & Wadehul, C. (2024). Normative Challenges of Risk Regulation of Artificial Intelligence. *Nanoethics*, 18(11), 10-29.
- Paul, R. (2023). European Artificial Intelligence "Trusted Throughout the World": Risk-based Regulation and The Fashioning of a Competitive Common AI Market. *Regulation and Governance*, 18(4), 1065-1082.
- Powell, J. (2024). Progressive Path-Dependency? *Journal of Economic Issues*, 58(1), 13-23.
- Rajendra, J., & Thuraisingam, A. (2025). The Role of Explainability and Human Intervention in AI Decisions: Jurisdictional and Regulatory Aspects. *Information & Communication Technology Law*, 1-32.
- Schmidt, R., & Scott, C. (2021). Regulatory Discretion: Structuring Power in The Era of Regulatory Capitalism. *Legal Studies*, 41, 454-473.
- Segate, R., & Daly, A. (2024). Encoding the Enforcement of Safety Standards into Smart Robots to Harness Their Computing Sophistication and Collaborative Potential: A Legal Risk Assessment for European Union Policymakers. *European Journal of Risk Regulation*, 15, 665-704.
- Shandilya, S., Datta, A., Kartik, Y., & Nagar, A. (2024). Navigating the Regulatory Landscape. In S. Shandilya, A. Datta, Y. Kartik, & A. Nagar, *Digital Resilience: Navigating Disruption and Safeguarding Data Privacy* (pp. https://doi.org/10.1007/978-3-031-53290-0_3). New York : Springer Cham .

- Skelcher, C., & Smith, S. (2015). Theorizing Hybridity: Institutional Logics, Complex Organizations, and Actor Identities: The Case of Nonprofits. *Public Administrations*, 93(2), 433-448.
- T., C., & Laegreid, P. (2007). Regulatory Agencies: The Challenges of Balancing Agency Autonomy and Political Control. *Governance*, 20(3), 499-520.
- Thorun, C., & Diels, J. (2020). Consumer Protection Technologies: An Investigation Into the Potentials of New Digital Technologies for Consumer Policy. *Journal of Consumer Policy*, 43, 177-191.
- Truby, J., Brown, R., Ibrahim, I., & Parellada, O. (2022). A Sandbox Approach to Regulating High-Risk Artificial Intelligence Applications. *European Journal of Risk Regulation*, 13, 270-294.
- Vizoso, A., Vaz-Alvarez, M., & López-García, X. (2021). Fighting Deepfakes: Media and Internet Giants' Covering and Diverging Strategies Against Hi-Tech Misinformation. *Media and Communication*, 9(1), 291-300.
- Walter, Y. (2024). Managing the Race to the Moon: Global Policy and Governance in Artificial Intelligence Regulation-A Contemporary Overview and an Analysis of Socioeconomic Consequences. *Discover Artificial Intelligence*, 4(14), <https://doi.org/10.1007/s44163-024-00109-4>.
- Whittlestone, J., Nyrop, R., Alexandrova, A., Dihal, K., & Cave, S. (2019). *Ethical and Societal Implications of Algorithms, Data, and Artificial Intelligence: A Roadmap for Research*. London: Nuffield Foundation.

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