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# Regulating Artificial Intelligence for Inclusive Development: Policy Lessons from Emerging Economies

**Galih Ganitama Putra** [1]

[1] STIE Surakarta, Surakarta, Indonesia

## Abstract

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As artificial intelligence (AI) becomes increasingly embedded in governance and development processes, emerging economies face the challenge of regulating its use to promote inclusive outcomes rather than exacerbate inequalities. This study investigates how these countries approach AI regulation amid institutional, technological, and socio-economic constraints. Using a systematic literature review of peer-reviewed studies published between last five-year, the article explores the alignment of national policies with global ethical frameworks, the role of institutional capacity, and the effectiveness of participatory regulatory models. The findings reveal that most emerging economies rely on non-binding ethical principles and imported regulatory templates, often without sufficient localization or enforcement capacity. Through thematic synthesis, the article highlights the risks of regulatory fragmentation and exclusion, while identifying promising practices such as co-produced governance and regional cooperation. The study contributes by offering context-specific insights into the regulatory landscape and proposing pathways toward inclusive, enforceable, and adaptive AI governance.

## 1. Introduction

The integration of artificial intelligence (AI) into public and economic systems holds significant potential for promoting inclusive development, particularly in emerging economies. AI applications in health diagnostics, digital financial services, education, and agriculture are increasingly bridging service delivery gaps and fostering economic participation in underserved regions (Vinuesa et al., 2020). However, without deliberate regulatory frameworks, these technologies risk reproducing or exacerbating social inequalities, institutional biases, and asymmetries in power and access. A growing body of research has therefore sought to systematically evaluate how regulatory frameworks can both encourage innovation and embed inclusive, rights-based safeguards (Batool et al., 2023).

Global governance instruments such as the OECD Principles on AI and UNESCO's Recommendation on the Ethics of AI (2022) emphasize key values including transparency, accountability, fairness, and human dignity. Yet systematic literature reviews highlight the gap between these high-level principles and their translation into enforceable regulations, especially in emerging economies facing institutional and technical capacity constraints (Comunale & Manera, 2024).

Batool et al. (2023) reviewed over 60 peer-reviewed studies on AI governance, identifying persistent fragmentation in regulatory responsibilities across sectors and states. They argue that most AI governance still occurs at the organizational or national level, with limited integration of cross-sectoral accountability or participatory mechanisms. Similarly, Goellner et al. (2024) underscore the need for "Responsible AI" frameworks to evolve from abstract ethical discussions to

operational norms that prioritize inclusivity, especially in data governance, model transparency, and redress mechanisms.

Historical concerns about algorithmic discrimination especially in welfare, policing, and credit scoring have shaped AI regulatory discourse. Contemporary reviews document how automated decision systems disproportionately impact vulnerable communities, reinforcing the need for enforceable public oversight and accountability mechanisms (Comunale & Manera, 2024).

Gutierrez (2024) maps nine regulatory modalities including risk-based, rights-based, and liability-focused approaches emphasizing the importance of local context and adaptive governance in Global South settings. These findings resonate with recent empirical studies showing that policy experimentation, regional cooperation, and inclusive stakeholder engagement are essential to crafting effective AI oversight in emerging economies (Findlay et al., 2023).

By synthesizing scholarship published between last five-years, this article contributes to the literature by identifying regulatory strategies that can foster equitable and inclusive AI adoption in emerging economies. It examines institutional preconditions, policy design features, and capacity-building efforts that enable governments to regulate AI effectively without stifling innovation. The findings aim to guide policymakers and development practitioners in navigating the complex intersection of AI governance and inclusive development.

## 2. Literature Review

The regulation of artificial intelligence (AI) in emerging economies has become an increasingly critical area of study, as scholars examine how governance frameworks can balance technological innovation with inclusive development goals. Early contributions to this discourse emphasized the risks of algorithmic bias and the social implications of automated systems. These foundational insights have influenced later regulatory frameworks that prioritize fairness, transparency, and accountability.

More recent studies have adopted systematic approaches to classify and assess AI governance models. Batool et al. (2023) reviewed several peer-reviewed works and concluded that regulatory responsibilities remain fragmented, with little coordination between national and organizational levels. Similarly, Goellner et al. (2024) found that "Responsible AI" principles are rarely operationalized in developing contexts, due in part to institutional constraints and the absence of enforcement mechanisms. These findings suggest that ethical guidelines alone are insufficient and must be paired with adaptable legal tools and stakeholder engagement strategies.

In many emerging economies, AI regulation is shaped by earlier digital governance models and influenced by external policy frameworks. Findlay et al. (2023) note that countries in Southeast Asia, Africa, and Latin America often adapt governance approaches from the Global North, leading to concerns over regulatory misalignment and a lack of contextual sensitivity. This "regulatory borrowing" can

result in gaps between principle and practice, especially in countries with limited technical and legal infrastructure.

International institutions have sought to address these challenges by promoting inclusive and flexible regulatory models. Gutierrez (2024) identifies nine regulatory modalities including principles-based, risk-based, and liability-based approaches that can be tailored to different governance environments. It emphasizes that developing countries should prioritize regulatory designs suited to their institutional capacities and developmental priorities. Likewise, recent institutional analyses stress that AI regulation in these regions must be integrated with broader economic policies such as labor protection, competition, and public sector reform (Comunale & Manera, 2024).

Overall, the literature points to a growing consensus: inclusive AI regulation in emerging economies requires more than ethical declarations. It demands enforceable, locally grounded frameworks that address social equity, build institutional capacity, and foster regional collaboration.

## 3. Methods

This study adopts a systematic literature review (SLR) approach to examine how artificial intelligence (AI) is regulated in emerging economies, with a focus on promoting inclusive development. The review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework to ensure transparency and replicability (Page et al., 2021). Peer-reviewed journal articles, books, and institutional reports published last five-years were included. The search

was conducted using academic databases such as Scopus, Web of Science, and Google Scholar, using keywords including "AI regulation," "inclusive development," "responsible AI," and "emerging economies". Studies were selected based on their relevance to AI governance models, policy implementation, and social inclusion outcomes. Only English-language sources with full-text access were considered. After screening titles and abstracts, a several studies were included in the final review. Data were extracted and categorized thematically, focusing on regulatory models, institutional capacity, stakeholder participation, and policy outcomes. The synthesis aimed to identify common patterns, contextual challenges, and policy recommendations applicable to low- and middle-income countries (Booth et al., 2021).

## 4. Results and Discussion

This systematic review reveals several critical themes that define the current state of artificial intelligence (AI) regulation in emerging economies. One of the most prominent findings is the widespread adoption of high-level ethical principles over binding legal instruments. Many emerging economies have aligned themselves with global normative frameworks such as the EU's Trustworthy AI guidelines and UNESCO's Recommendation on the Ethics of AI. These principles emphasize transparency, fairness, accountability, and human-centered design, but their voluntary nature limits enforcement and real-world impact (Gutierrez, 2024; Comunale & Manera, 2024). Studies such as Batool et al. (2023) and Goellner et al. (2024) support this view, indicating that while such frameworks establish normative

baselines, their implementation often remains symbolic due to institutional and resource constraints.

A recurring theme in the literature is the institutional capacity challenge. Most regulatory agencies in emerging economies struggle with inadequate technical expertise, limited financial resources, and fragmented policy mandates, which inhibit their ability to effectively monitor, implement, or adapt AI-related regulations. Countries such as Brazil, India, and South Africa have initiated AI policy strategies, yet these efforts are hampered by underdeveloped digital infrastructure and overlapping regulatory frameworks (Findlay et al., 2023). Moreover, the lack of standardized data governance systems and regulatory tools limits the ability of these nations to detect algorithmic bias or hold developers accountable. This institutional weakness not only reduces the effectiveness of AI regulation but also exacerbates risks related to privacy violations, social exclusion, and unequal access to technological benefits.

The review also identifies a concerning trend of regulatory fragmentation and overreliance on models imported from the Global North. Policymakers in many emerging economies tend to adopt legal and institutional frameworks modeled after the European Union or the United States, often without sufficient contextual adaptation. This phenomenon, known as "regulatory borrowing," can lead to significant implementation gaps when domestic legal cultures, market structures, and societal values are not considered (Findlay et al., 2023). Scholars caution that such transplants may fail in settings where informal economic activities dominate and state capacity is weak, leading to policy failure or unintended social harm.

Despite these challenges, some positive developments have emerged. There is a growing recognition across the literature of the need for participatory and adaptive governance in AI regulation. Several studies emphasize that inclusive regulation must be co-produced with diverse stakeholders, including civil society, marginalized communities, academia, and private sector actors. Participatory approaches help ensure that AI systems are designed and governed in ways that are socially responsive and contextually appropriate (Goellner et al., 2024). This is particularly important in regions where algorithmic decisions can significantly affect access to education, healthcare, or social protection.

Moreover, regional initiatives have begun to fill regulatory gaps and promote cooperative governance. The African Union's Data Policy Framework and ASEAN's emerging digital governance platforms illustrate how countries can coordinate policy development, share best practices, and promote local innovation while building regional capacity (Findlay et al., 2023; Gutierrez, 2024). These collaborative models are especially relevant for addressing transboundary risks, such as data sovereignty, digital surveillance, and the export of biased AI systems. They also offer a way to reduce dependency on external regulatory models and support homegrown, culturally sensitive frameworks that align with national development goals.

In summary, while many emerging economies have taken initial steps toward regulating AI through ethical frameworks, the lack of institutional capacity, reliance on foreign models, and exclusion of local actors remain significant challenges. To ensure AI contributes meaningfully to inclusive development, a shift is needed

toward enforceable, participatory, and context-specific regulatory approaches. The findings highlight the urgent need for investments in institutional development, stakeholder engagement, and regional cooperation to build robust, adaptive AI governance systems capable of promoting social equity and digital justice.

## 5. Conclusion

This review underscores the complex challenges and opportunities associated with regulating artificial intelligence (AI) for inclusive development in emerging economies. While many countries have embraced global ethical frameworks and initiated national AI strategies, significant gaps remain in enforcement, institutional capacity, and contextual relevance. The reliance on imported regulatory models without adequate localization has often led to weak implementation and limited societal impact. Moreover, the exclusion of marginalized voices from regulatory processes risks deepening existing inequalities, particularly in sectors where AI technologies are rapidly being adopted.

To move forward, emerging economies must prioritize participatory, context-specific, and enforceable regulatory approaches. Strengthening institutional capacity, fostering stakeholder engagement, and promoting regional cooperation are critical to ensuring that AI contributes meaningfully to inclusive and equitable development. Rather than merely replicating models from the Global North, policymakers should focus on building adaptable governance systems that reflect local values, socio-economic realities, and development goals. Only through such inclusive and

grounded approaches can AI be effectively regulated to support digital justice and long-term human development.

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