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BRIDGING THE DIGITAL DIVIDE: CHINESE EXPERIENCES AND COLLABORATIVE AI GOVERNANCE FOR ASEAN INCLUSIVE TRANSFORMATION

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Abstract
Southeast Asia's digital economy is approaching USD 1 trillion, yet the region's artificial intelligence (AI) transformation is constrained by regulatory fragmentation, data sovereignty concerns, and unequal access to computing capacity and talent. Based on a keynote address delivered at the 5th ICEBMR 2026 in Yogyakarta, this article argues that neither the European risk-tiering model nor the United States market-first model can be transplanted directly into the Association of Southeast Asian Nations (ASEAN). It proposes a Nested Governance Matrix in which regulation, security, and industry work as three interlocking gears of collaborative governance. Drawing on Chinese experiences with agile governance and infrastructure-driven capacity building, and on three cases (Chinese micro-dramas in Indonesia, localized cloud infrastructure in Indonesia and Malaysia, and the China-Laos AI Application Cooperation Center), the article shows how sovereignty and cooperation can be co-designed rather than negotiated after the fact. It then outlines a three-stage roadmap from bilateral agile sandboxes to a multilateral umbrella under the ASEAN Digital Economy Framework Agreement (DEFA). The article concludes that a development-first, people-centric "ASEAN Way" can offer the Global South a credible alternative in global AI governance.
Keywords*: AI governance, digital divide, ASEAN, data sovereignty, agile governance*

Introduction

Asia's digital transformation reveals a paradox. On one side lies what may be called the Great Leap: the ASEAN digital economy is approaching USD 1 trillion and is projected to double under the ASEAN Digital Economy Framework Agreement (DEFA). This momentum is also bottom-up, as millions of small and medium-sized enterprises (SMEs), ride-hailing drivers, and artisans move online across the region. On the other side stands an Invisible Wall of institutional friction, including clashing data sovereignty rules, algorithmic bias, and persistent compliance uncertainty. The region must therefore answer a core question: how can it harness the economic potential of AI while protecting human dignity and local sovereignty?

This question matters because the AI era has transformed the digital divide from a matter of internet access into a broader challenge. It also concerns who writes the rules, who owns the data, who controls computing capacity, and who has the skills to build and maintain AI systems. Governance approaches developed elsewhere often overlook these realities. This article develops an ASEAN-relevant approach to AI governance that draws on Chinese experience for comparison and inspiration, while insisting that these experiences are neither a ready-made template nor directly replicable in ASEAN.

The article makes three contributions. First, it explains why the dominant European and American governance models fit ASEAN poorly and why ASEAN itself must be understood as a heterogeneous, three-tier landscape rather than a single bloc. Second, it proposes a Nested Governance Matrix that links regulation, security, and industry, and it examines each dimension through Chinese experiences and concrete cases in Indonesia, Malaysia, and Laos. Third, it presents a pragmatic three-stage roadmap that moves from bilateral agile sandboxes to a multilateral framework under DEFA.

Literature Review

Global AI Governance Models

The European Union model

The European approach is characterized by high compliance and risk-tiering. The EU Artificial Intelligence Act (European Union, 2024) is widely regarded as a landmark of comprehensive AI regulation. For ASEAN, however, the heavy cost of algorithmic certification is a concern, because such costs can stifle SMEs and start-ups that lack legal and technical departments.

The United States model

The American approach puts market interests first and relies on self-regulation. Its critics point to technology giants that answer to few external checks, to platform monopolies that remain largely unchecked, and to gig workers who are left vulnerable. Both models carry strengths in their own settings, but each presumes institutional capacities that many ASEAN economies are still building.

The trap of direct transplantation

The central risk for ASEAN lies in directly copying and adopting extraterritorial rules. Such an approach ignores local developmental realities and the heterogeneity of the region, and a one-size-fits-all solution cannot work. This observation motivates the search for a governance model grounded in ASEAN's own conditions.

ASEAN's Heterogeneous Digital Landscape

ASEAN is not one digital market but a map of at least three tiers with different AI governance postures. In the first tier are the rule-makers, with Singapore as the leading example. Singapore hosts roughly 390 AI start-ups according to StartupBlink 2026, has adopted National AI Strategy 2.0 (2023), and, through the Infocomm Media Development Authority (IMDA), issued in January 2026 what has been described as the world's first governance framework for agentic AI (Infocomm Media Development Authority, 2026). Its approach relies on voluntary frameworks and industry guidance.

The second tier consists of industry pivots. Malaysia has halted approvals of non-AI data centers since 2024, as stated by Prime Minister Anwar Ibrahim in a parliamentary reply on 24 February 2026, and it reports a digital investment pipeline of RM 59.1 billion (April 2025). It is also pursuing a Sovereign AI Cloud and hosts the secretariat of the ASEAN AI Safety Network. Thailand is concentrating on smart ports and logistics AI.

The third tier comprises what may be called sovereignty giants, which are massive markets with strict sovereignty positions. Indonesia combines the Personal Data Protection Law of 2022 (Republic of Indonesia, 2022) with Government Regulation No. 71 (Republic of Indonesia, 2019), which localizes financial data. Vietnam enacted the region's first dedicated AI Law, with 35 articles, in force since 1 March 2026, and it targets AI contributing about 6% of GDP and a top-three position in Southeast Asia by 2030. These differences show why harmonization cannot be achieved by uniform rules alone.

Research Methods

This study adopts a qualitative, interpretive approach based on comparative policy analysis and illustrative case studies. This study uses a conceptual and policy-oriented analysis rather than a statistical one, aiming to build a framework and assess its plausibility through concrete cases instead of estimating causal effects.

Data Sources

The evidence comes from four types of material: (1) regulatory texts and official measures, including China's algorithm, deep synthesis, generative AI, and AI-labeling measures, Indonesia's PDP Law and GR 71, and Vietnam's AI Law; (2) government statements, such as IMDA publications and the Malaysian parliamentary reply of 24 February 2026; (3) industry and international reports, including StartupBlink 2026 and UNESCO RAM 2026; and (4) public statements and announcements related to the cases, including those of the Malaysia Digital Economy Corporation (MDEC) and the Johor state data center committee (2025).

Analytical Framework and Case Selection

The analysis is organized around the Nested Governance Matrix, in which regulation, security, and industry are treated as interlocking dimensions. Three cases were selected because each illustrates

how one dimension can be navigated in practice. Table 1 summarizes the mapping. The cases are illustrative and are not claimed to be statistically representative of all ASEAN member states.

Table 1. Cases and their analytical dimensions

No	Case	Location	Dimension	Core mechanism
1	Chinese micro-dramas	Indonesia	Regulation	Agile localization of recommendation algorithms
2	Alibaba Cloud and Huawei Cloud data centers	Indonesia and Malaysia	Security	Data stays in-country; algorithms and expertise travel
3	China-Laos AI Application Cooperation Center and Nanning Roundtable	Laos and Guangxi	Industry	Sub-regional sandbox and policy coordination

Source: Author's elaboration

Research Findings and Discussion

The Nested Governance Matrix

This article argues for an AI governance approach that moves beyond silos. Regulation determines market access and compliance cost. Security sets a hard boundary for compute and data. Industry provides the sandbox in which rules can be iterated and tested. As shown in Figure 1, these are three interlocking gears of collaborative governance, and if one gear jams, the whole vehicle stops. A regulatory framework without secure data infrastructure lacks trust, and a secure environment without industrial capacity produces no innovation. The remainder of this section examines each gear in turn.

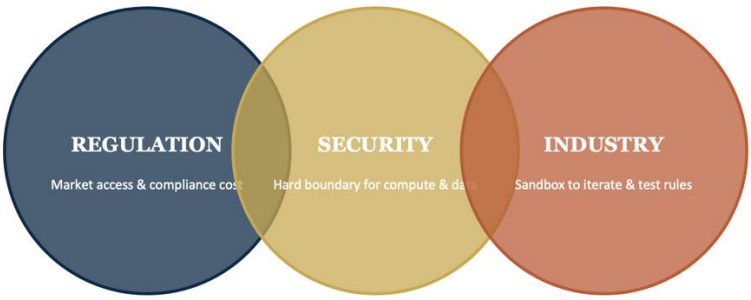


Figure 1. The Nested Governance Matrix
Source: Author's elaboration

Dimension 1: Regulation

Regulating while running: agile governance in China

The first Chinese experience concerns what may be called tolerant prudence, a development-first doctrine summarized as "development and security in synergy" rather than security at the expense of growth. From fintech to generative AI, China has generally avoided blanket pre-market bans. Its Algorithm Filing System (*suanfa beian zhi*) asks developers to register the basic logic of their algorithms so that regulators can track risks dynamically. Dynamic sandboxes then allow innovation to breathe while baseline harms are still policed. This approach resembles a longer tradition of policy experimentation in China, in which local trials inform national rules (Heilmann, 2008). Table 2 gives an overview of the regulatory framework.

Table 2. Overview of the regulatory framework for AI in China

Regulation	Effective date	Competent authority	Scope of application
Provisions on the Management of Algorithmic Recommendations	March 2022	CAC	Recommendation algorithms

Regulation	Effective date	Competent authority	Scope of application
Provisions on the Administration of Deep Synthesis	January 2023	CAC and MIIT	Deepfakes and synthesis
Interim Measures for the Management of Generative AI Services	August 2023	CAC	Large model services
Measures for Labeling AI-Generated Content	September 2025	CAC and SAC (National Standards Commission)	All AI-generated content
Artificial Intelligence Law (Draft)	December 2025 (draft for comments)	National People's Congress	All AI domains

Source: Keynote materials; Cyberspace Administration of China (2022, 2023)

The lesson for ASEAN is that building an AI ecosystem does not require a thousand-page law. In emerging-market contexts, agile and dynamic guardrails tend to perform better than rigid ex-ante permissioning.

The DEFA promise and domestic reality

DEFA is a landmark deal on paper. Its negotiation has concluded, and it covers digital trade, e-commerce, data, AI, and talent mobility. Its "ASEAN Minus X" formula allows ready members to move faster without waiting for full uniformity. On the ground, however, the region remains a fragmented jungle of eleven countries and eleven rulebooks. For example, a fintech firm in Surabaya may need to comply with eleven different privacy and licensing regimes. Such fragmentation acts as a regressive tax on the small firms that anchor ASEAN societies. DEFA therefore provides elasticity, not uniformity, and the real test is whether ASEAN can turn that elasticity into interoperability.

Case 1: Micro-dramas in Indonesia

The explosive growth of Chinese micro-dramas across Southeast Asian app stores illustrates the regulatory maze. Direct exportation of recommendation algorithms runs into Indonesia's distinct cultural, religious, and digital platform regulations. The strategy that proved workable was the dynamic adjustment of recommendation algorithms to respect local cultural guardrails. This "soft compliance" or agile localization shows that navigating a regulatory maze does not always mean forcing the host country to change its laws. Technology must adapt to local cultural dignity and regulatory red lines, not the other way around.

Dimension 2: Security

The sovereign trust paradox

Security is the elephant in the room. Developing countries need foreign technology to develop, yet adopting it can feel like an infringement on sovereign control. Their demand for data sovereignty is legitimate, as seen in Indonesia's GR 71 on financial data and in Vietnam's AI Law of 2026. Geopolitical anxieties, meanwhile, often label any foreign technology cooperation as a security risk. Unilateral "technology dumps," where providers give black-box software in exchange for data, deepen suspicion. Genuine trust requires shared ownership rather than asymmetric extraction. The paradox is structural: sovereignty and cooperation must be co-designed, not negotiated after the fact.

Case 2: Anchoring trust through localized infrastructure

Cloud and sovereign computing in Jakarta offer a practical response. Alibaba Cloud and Huawei Cloud have invested in localized, state-of-the-art data centers in Indonesia and Malaysia instead of extracting data back to headquarters, a step that converts compliance boundaries into cooperation hubs. The keynote materials report full compliance with Indonesia's PDP Law and GR 71 and describe the expansion of Huawei Cloud's Indonesia region from three to four availability zones in 2026 (MDEC statements; Johor state data center committee, 2025). The guiding principle is that data stay in the country while algorithms and expertise travel. Trust is thereby built on physical commitment rather than contractual promises.

Dimension 3: Industry

Without computing and talent, governance is a ghost ship

The real digital divide lies in infrastructure and talent. Regulatory talk means little if local universities lack compute and local youth lack AI skills. Southeast Asia suffers a severe AI talent drain toward those great powers. Even within ASEAN, access to graphics processing units (GPUs) and grid capacity varies by an order of magnitude, and micro, small, and medium enterprises (MSMEs) struggle with connectivity costs and a shortage of localized AI engineers. A "ghost ship" of frameworks without hardware, datasets, and trained people cannot move. Governance must therefore be grounded in tangible capacity building rather than abstract principles.

Infrastructure first: the second Chinese experience

The second Chinese experience is summarized by the saying "if you want to get rich, build roads first(Yao xiang fu,Xian xiu lu)." China's digital leapfrogging happened because 5G, fiber, and cloud preceded the enterprise boom. Trillions of RMB were invested in 4G, 5G, fiber optics, and rural power grids before consumer applications exploded. The lessons for cooperation include joint training initiatives that upskill local engineers rather than only shipping black-box software, and the open-sourcing of foundational code so that partners can adapt and maintain systems locally. These measures transform passive technology consumers into active co-creators. The key insight is that infrastructure is a public good that lowers the coordination cost of every subsequent industry.

Guangxi as a Bridgehead

Geography and institutions

A Chinese autonomous region matters for ASEAN AI governance because of Guangxi's position. It is the permanent host of the China-ASEAN Expo, which has run for 23 years, and it shares land and sea borders with ASEAN as the only Chinese province connected to the region by both land and sea. Guangxi is moving beyond trade corridors toward digital and intelligent economic connectivity, and it links the Regional Comprehensive Economic Partnership (RCEP), DEFA, and the Belt and Road Initiative in a single regional node. It is therefore a natural testing ground for bilateral policy experiments, digital trade rules, and AI cooperation.

Case 3: The China-Laos AI Center and the Nanning Roundtable

The China-Laos Artificial Intelligence Application Cooperation Center in Vientiane, built by the Guangxi Investment Group in two months, was formally launched on 18 September 2025 during the China-ASEAN Ministerial Roundtable on AI in Nanning. It is described as the first national-level AI cooperation platform between China and an ASEAN member state. A sub-regional sandbox in Vientiane combined with policy coordination in Nanning illustrates a model of research and development in major Chinese centers such as Beijing, Shanghai, and Guangzhou, integration in Guangxi, and application in ASEAN(Bei shang guang yan fa,Guangxi jicheng,Dongmeng ying yong).

A Pragmatic Three-Stage Roadmap

Building on these findings, the article proposes a three-stage evolution from bilateral agile sandboxes to a DEFA multilateral umbrella, summarized in Table 3. The sequence starts with low-risk verticals where trust can be built quickly, then scales through corridors, and finally embeds tested mechanisms in regional agreements.

Table 3. Three-stage roadmap for collaborative AI governance

Stage	Horizon	Focus	Key elements
1	1-2 years	Bilateral agile sandboxes	Start with low-risk verticals such as cross-border e-commerce, agriculture, and multilingual tools; bilateral cooperation first
2	3-5 years	Sub-regional corridor hubs	Scale through Guangxi-ASEAN digital corridors; mutual recognition of algorithmic audits; regional data-sharing protocols for disaster monitoring and healthcare

Stage	Horizon	Focus	Key elements
3	5-10 years	DEFA multilateral umbrella	Embed tested bilateral mechanisms into DEFA and RCEP; a flexible, ASEAN-friendly common minimum baseline for AI governance

Source: Author's elaboration

The ASEAN Way as a Developing-World Voice

For decades the "ASEAN Way" has shown how to navigate immense diversity through consultation, consensus, patience, and non-interference (Acharya, 2014). Extended to cyberspace, it offers a consensus-based, non-confrontational, and step-by-step alternative to Western blocs. It balances ethics with the fundamental right to economic development and offers the Global South a genuine alternative to technological hegemony. Combining Chinese industrial depth with ASEAN market dynamism points toward a development-first, people-centric model, with the shared aim of building digital sovereignty together.

Conclusion

This article has argued that bridging the digital divide in ASEAN requires collaborative AI governance that fits regional realities. European and American playbooks cannot simply be transplanted into a region of heterogeneous tiers, from rule-makers to sovereignty giants. The Nested Governance Matrix shows that regulation, security, and industry must be designed together. Chinese experiences with agile guardrails and infrastructure-first capacity building, together with the three cases examined, suggest practical routes: localize algorithms, keep data in-country while letting algorithms and expertise travel, and invest in computing and talent before demanding compliance.

Three implications follow. For policymakers, agile and dynamic guardrails are better suited to emerging-market contexts than rigid ex-ante permissioning, and DEFA's elasticity should be converted into interoperability. For firms, trust is built through physical commitments such as local infrastructure and joint training. For regional cooperation, starting with bilateral sandboxes in low-risk verticals and scaling toward a multilateral umbrella is more realistic than seeking immediate uniformity. The article is limited by its qualitative design and its small set of illustrative cases. Future research could test the framework quantitatively, for example by measuring how regulatory fragmentation affects SME adoption of AI, and could extend the case base to other ASEAN member states. Ultimately, the future of AI in Asia will be decided in the marketplaces of Yogyakarta, the innovation hubs of Jakarta, and the trading ports of Guangxi, and it should honor local sovereignty and lift human dignity.

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