

Triadic Contest: The US, China, EU, and the Battle for the Soul of AI

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Abstract

Amid the rapid diffusion of artificial intelligence and the growing politicization of emerging technologies, global AI governance is increasingly shaped by strategic competition among major powers. This paper analyzes the emerging triadic contest among the United States, China, and the European Union over AI governance and argues that it is reshaping global order through a fusion of technological rivalry, institutional competition, and normative contestation. It compares three governance paradigms — U.S. “innovation-first”, China’s sovereignty-centered, state-guided model, and the EU’s rules-based, rights-oriented approach — and traces how they collide across four battlegrounds: technological supremacy, global rulemaking and standards, Global South markets and infrastructure, and military AI. The paper shows that this rivalry is accelerating digital fragmentation (“splinternet”), raising duplication and compliance costs, weakening a shared innovation commons, and heightening systemic and security risks. It concludes by proposing “managed contest”: bounded competition coupled with minimal cooperative guardrails and interoperable frameworks to contain shared AI risks.

Keywords

AI governance; geopolitical competition; triadic order; normative power; technological rivalry.

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1. Introduction

The United States, China, and Europe are forging radically different paths for artificial intelligence. Their competition will determine whose values govern the most transformative technology of our time.

The current world scramble for artificial intelligence supremacy evokes historical parallels to the nuclear age, but with transformative distinctions. Unlike nuclear technology, which was contained within state control under the Non-Proliferation Treaty, AI is inherently diffuse — driven by open-source models, commercial labs, and cross-border data flows. According to the Stanford AI Index 2024, over 60 nations now boast national AI strategies ([Human-Centered Artificial Intelligence, 2024](#)). Whereas the Cold War established clear red lines through threats of mutually assured destruction and concerted efforts at nonproliferation, the AI race lacks consensus on even basic risk thresholds, for example, measuring compute thresholds for model capabilities or defining autonomous weapons parameters. This new technological competition is rewriting the rules of structural power, as Susan Strange's framework predicted: control over AI's knowledge production and security applications may prove more consequential than traditional military or economic dominance.

Recent events have crystallized this geopolitical realignment. The United States' semiconductor export controls marked the most sophisticated technological containment effort since the Coordinating Committee for Multilateral Export Controls (COCOM), targeting not just hardware but the very ecosystem of AI innovation. China is rolling out its "AI Plus" initiative with strong state backing. Approved by the State Council, it aims to integrate AI deeply into core sectors of the economy by 2027, in support of a transition toward an intelligent, digitally empowered development model ([The State Council of the People's Republic of China, 2025](#)). Meanwhile, the European Union's enforcement of its AI Act — with its extraterritorial reach over any company accessing its 450 million consumers — constitutes the most ambitious regulatory power projection since the General Data Protection Regulation (GDPR) ([European Commission, 2024](#)). These moves transcend mere policy differences. Rather, they reflect largely divergent and difficult-to-reconcile visions of technological order, a "digital Thucydides Trap", as Graham Allison might frame it, in which an established power's alliance systems collide with a rising power's governance paradigms ([Allison, 2015](#)).

This paper argues that the emerging global order around AI is being shaped by a triadic contest among the United States, China, and the European Union — each promoting distinct governance logics that reflect their political systems and strategic ambitions. Washington's market-centric model enshrines Silicon Valley's "move fast and break things" ethos, trusting corporate innovation to balance profit and safety. Beijing's governance-led approach treats AI as both economic accelerant and social stabilizer, leveraging massive datasets under strict government guidance and policy safeguards. Brussels' rights-based framework prioritizes individual protections through precautionary regulation, even at the cost of innovation velocity. These paradigms are interacting yet often in tension. The U.S. fears China's state-capacity will outcompete its markets while China suspects Western rules mask technological containment. Europe, caught somewhere in the middle, worries that both superpowers will trample human dignity in their rivalry.

The stakes are both strategic and normative. Three structural shifts make this moment decisive. First, the transition from narrow AI to foundation models creates winner-takes-all dynamics in both commerce and governance. Second, the convergence of AI with biotech, energy, and defense systems multiplies its disruptive potential. Third, the Global South's rapid adoption, with countries like India and Nigeria now deploying AI for everything from crop monitoring to welfare distribution, means these standards battles will lock in within this decade (Kaur, 2025). The next few years will determine whether AI evolves as a fragmenting force — with incompatible technical stacks, balkanized data regimes, and competing security frameworks — or finds mechanisms for coexistence that preserve some shared digital commons.

The central question motivating this paper is: *Can these divergent governance models coexist — or will AI become the fault line of a new digital order defined by incompatible standards and mutual suspicion?* The answer carries implications not only for the three major powers but also for the Global South, whose growing AI adoption could either amplify fragmentation or foster inclusive cooperation.

This paper proceeds in four sections. Section 2 analyzes the divergent strategic logics of the U.S., China, and the EU in AI governance. Section 3 examines the normative and institutional contestation across global and regional standard-setting arenas. Section 4 assesses the implications for the Global South and the governance gaps emerging from this triadic rivalry.

Section 5 concludes with policy recommendations for building interoperability, procedural fairness, and shared capacity-building mechanisms to prevent AI from becoming a driver of global fragmentation.

2. The Three Paradigms: Divergent Visions for AI

The global contest over artificial intelligence does not take place under a monolithic model. It is driven by three distinct, and largely incompatible, visions for how AI should be developed, deployed, and governed. Rooted in divergent political philosophies, historical contexts, and conceptions of sovereignty, the approaches of the United States, China, and the European Union represent competing models for organizing technological advancement and accepting its role in society (Albert, 2024). Each paradigm offers a coherent, yet contested, blueprint for the future, complete with its own strategic logic, policy tools, and inherent challenges (Sullivan, 2023).

2.1. The United States: The “Innovation-First” model

Philosophically, the American model is the embodiment of market liberalism, which posits that technological progress is best achieved through private competition, minimal state intervention, and the disruptive force of entrepreneurial capitalism. This ideology underpins the U.S. “innovation-first” paradigm, which prioritizes technological breakthrough above all. The state’s role is not to direct but to enable, fostering an ecosystem where agile, “light-touch” governance allows private capital and companies to flourish (Bartl, 2025). Giants like Google, OpenAI, and Anthropic are not merely commercial entities; they are the de facto instruments of American technological statecraft and the primary vehicles for its global influence.

This vision is strategically enforced through a sophisticated two-pronged approach: nurturing unassailable dominance at home while systematically curbing foreign challenges. Domestically, this translates into massive public investment in foundational R&D through initiatives like the CHIPS and Science Act and the National AI Research Resource (NAIRR), alongside a vibrant venture capital landscape. In 2023, private investment in U.S. AI ventures exceeded \$67 billion — far outstripping funds deployed in any other country and reinforcing America’s role as the dominant engine of private-sector AI innovation (Human-Centered Artificial Intelligence, 2024).

Abroad, however, the strategy turns sharply realist. The foreign policy of “small yard, high fences” is aggressively implemented through stringent export controls. The Bureau of Industry and Security (BIS) rules, for example, specifically targeted advanced AI chips from companies like Nvidia, designed to plug loopholes and slow China’s progress in military AI applications ([Bureau of Industry and Security, U.S. Department of Commerce, 2025](#)). Diplomatically, Washington is weaving a web of “techno-democratic” alliances, such as the G7 Hiroshima Process and the U.S.-EU Trade and Technology Council, aiming to form a coalition of nations around a shared vision of AI governance that is inherently permissive to the interests of its leading tech firms.

However, this model exhibits deepening contradictions as AI’s societal impacts intensify. The same market dynamism that propelled ChatGPT to 100 million users within two months has struggled to address consequential failures — from racial bias in healthcare algorithms to generative AI’s copyright crises and autonomous vehicle malfunctions. These cases reveal a structural tension. While America leads in capabilities (commanding over half the world’s top AI startups), its regulatory framework remains a patchwork of sector-specific rules and voluntary pledges, lagging behind the EU’s comprehensive AI Act and China’s tiered governance system ([Allison and Schmidt, 2020](#)). Microsoft President Brad Smith’s congressional testimony captured this paradox, comparing the situation to “athletes writing their own doping rules during the Olympics” ([U.S. Senate Judiciary Committee, Subcommittee on Privacy, Technology, and the Law, 2023](#)).

The geopolitical ramifications compound these challenges. Export controls have accelerated China’s dual-circulation strategy, with firms like Huawei Technologies promoting the Ascend series chips as a domestic substitute for Western GPUs in LLM training. Meanwhile, some Global South countries have expanded cooperation with Chinese firms in digital infrastructure, a trend that may complicate U.S. alliance-building efforts. In standards bodies such as the Institute of Electrical and Electronics Engineers (IEEE) Standards Association, the U.S. maintains substantial influence through its dominant share of corporate and national members — a position that some observers say weakens its moral authority when strict ethical guidelines are questioned. This tension between innovation dominance and governance fragmentation poses a quasi-existential question: can America maintain its technological primacy while addressing the societal

risks that unchecked progress generates? The answer may determine whether the “innovation-first” model remains sustainable in an era where AI’s transformative power demands commensurate responsibility.

2.2. The European Union: The “Rules-Based” model

In contrast to the traditionally market-oriented U.S. approach, the European Union has pursued an extensive regulatory strategy to shape the development and deployment of artificial intelligence through legal frameworks. The EU’s “rules-based” model is deeply rooted in a social-market philosophy and the precautionary principle, which mandates that in the face of uncertain risks, regulatory action should be taken to prevent harm. This ethos prioritizes the protection of fundamental rights, democratic integrity, and social welfare over the primacy of disruptive innovation. The landmark AI Act is the embodiment of this philosophy. It is a comprehensive legal framework that categorizes AI applications by risk (unacceptable, high, limited, minimal) and imposes strict obligations.

A quintessential example is the Act’s treatment of General-Purpose AI Models (GPAI). Models like GPT-4, deemed to pose “systemic risks,” are subject to stringent pre-market and post-market requirements, including mandatory fundamental rights impact assessments, adversarial testing, and increased transparency on training data and energy consumption. This directly challenges the U.S. industry’s rapid-release modus.

Brussels’ primary strategic tool is the “Brussels Effect”. By leveraging the gravitational pull of its vast, wealthy single market — the world’s third-largest — the EU de facto sets global standards. Companies worldwide, whether American or Chinese, are compelled to comply with its regulations if they wish to access European consumers. This grants the Union immense normative power, allowing it to position itself as the global regulator, championing a vision of “ethical sovereignty” (Siegmann and Anderljung, 2022).

However, this regulatory dominance is not without trade-offs. Critics warn that the compliance burdens imposed by the AI Act could slow Europe’s pace of innovation. Despite its strength in regulation, the continent continues to face an innovation gap. It has yet to produce a home-grown player on the scale of OpenAI or DeepMind. Flagship start-ups such as France’s Mistral AI, though widely celebrated, still operate with resources far below those of their American counterparts. The paradox is clear. Europe accounts for a large share of the world’s academic output in

artificial intelligence, yet its ability to translate research into commercially viable patents and products lags behind. This imbalance reflects an ecosystem that prizes caution and rights-based safeguards, but often at the expense of speed, risk-taking, and scale.

Furthermore, the global applicability of its intricate, rights-based framework remains unproven, potentially limiting its influence in nations with different developmental priorities and political contexts. African and Southeast Asian policymakers increasingly question whether GDPR-style individual data rights align with collective societal values, while Brazilian regulators, as a sign of growing resistance to wholesale regulatory importation, have adapted EU concepts to their “digital sovereignty” framework (Liu, 2025). Europe must prove that ethical AI can be globally viable without sacrificing innovation and adaptability.

2.3. China: The “Governance-Led” model

China advances a governance-led paradigm, in which institutional coordination, regulatory steering, and state capacity play a central role in shaping AI development and deployment. This framework emphasizes the state’s strategic and coordinating role in aligning AI development with comprehensive national objectives, seeking to balance technological advancement, economic transformation, and social stability. Foundational to this model is the principle of maintaining cyber sovereignty and data security as prerequisites for sustainable development in the digital era. This vision is implemented through a multi-faceted strategy combining industrial policy, domestic regulation, and global engagement.

The state’s approach is systematic as its strategy is long-term. Industrial policy plays a central role, directing substantial public and private investment toward national AI champions — such as Baidu in search and autonomous driving or iFLYTEK in speech recognition — and key sectors identified in national strategies. The recent “AI Plus” action exemplifies this approach, aiming to deeply integrate artificial intelligence into traditional industries and economic modernization.

Data governance remains another critical pillar. The “East Data, West Computing” project (东数西算工程) exemplifies China’s strategy of leveraging data as a national resource while supporting regional development. By establishing large-scale data centers in western regions rich in renewable energy, the initiative simultaneously promotes energy efficiency,

strengthens data sovereignty, and reduces regional disparities — all within a coherent national framework (The State Council of the People's Republic of China, 2023a). Regulatory clarity continues to evolve through measures such as the 2023 Interim Measures for the Management of Generative Artificial Intelligence Services (《生成式人工智能服务管理暂行办法》) (The State Council of the People's Republic of China, 2023b). These regulations seek to balance innovation promotion with requirements for data accuracy and lawful processing, aiming to foster what officials term a “healthy and sustainable” AI ecosystem.

On the international stage, China advocates for a multipolar vision of digital governance. Through its Global AI Governance Initiative and related proposals, it promotes principles of “wide consultation, joint contribution, and shared benefits” (共商共建共享), positioning itself as a proponent of collaborative governance (Ministry of Foreign Affairs, 2023). This engagement extends to practical cooperation through mechanisms such as the Belt and Road Initiative, particularly with Global South nations.

China's global governance engagement has gained significant momentum through two major initiatives. At the 2025 World Artificial Intelligence Conference in Shanghai, Chinese authorities presented the “Global Governance Action Plan on Artificial Intelligence,” which proposes the establishment of an international AI governance agency and advocates for a UN-centered global governance framework (Ministry of Foreign Affairs, 2025). Complementing this effort, China spearheaded the resolution “Enhancing International Cooperation on Capacity-Building of Artificial Intelligence” at the 78th UN General Assembly, demonstrating its commitment to multilateral approaches in bridging the AI divide and supporting developing nations' participation in the AI ecosystem (United Nations, 2024).

Nevertheless, China's model is not without friction. An emphasis on technological self-reliance, intensified by external export controls, may deepen global technological decoupling and limit access to cutting-edge research and talent. Moreover, the model's strong emphasis on sovereignty and distinctive regulatory standards can complicate international collaboration and standard-setting processes. Building trust and demonstrating the global applicability of its AI vision remain ongoing tasks — ones that will require consistent dialogue and tangible contributions to global AI governance.

3. The Battlegrounds: Where the Triad Clashes

The divergent paradigms of the U.S., China, and the EU are not abstract philosophies. They are colliding in tangible arenas — technological, regulatory, economic, and military — that will define the future architecture of global power. From the silicon supply chain to multilateral negotiation rooms, this triadic contest is already reshaping the digital world order.

3.1. *The race for technological supremacy: Chips, compute, and models*

At the foundation of AI dominance lies a race across three pillars: hardware infrastructure, compute access, and algorithmic breakthroughs. Each actor in the triad pursues this supremacy through distinct strategies.

The United States holds a commanding, though not irreversible, lead. Its strategy is one of maintenance and denial. By leveraging its control over key segments of the semiconductor supply chain (through companies like Nvidia, AMD, and Applied Materials) and enacting increasingly stringent export controls, Washington aims to preserve a generational lead in the most advanced AI chips. The goal is to slow China's progress, particularly in military and frontier AI applications, by capping its access to cutting-edge computing power.

China's strategy is one of accelerated self-reliance. Faced with these restrictions, Beijing has mobilized vast national resources under a whole-nation approach to overcome its technological bottlenecks. Companies like Huawei are at the forefront, developing alternative GPU architectures (such as the Ascend series) and domestic AI frameworks (like PaddlePaddle) to create a decoupled ecosystem. The emergence of competitive open-source models from domestic players like DeepSeek further enriches this indigenous innovation landscape (Chan *et al.*, 2025). Although still trailing on global benchmarks, Chinese efforts demonstrate the strategic logic of building parallel systems capable of functioning independently — should geopolitical decoupling intensify.

The EU remains relatively constrained compared to both the United States and China, occupying a position of structural dependence in key segments of the AI value chain. It lacks a champion in the chip or foundational model race, relying heavily on U.S. technology for its most ambitious AI projects. Its response, the Chips Act, aims to double its global semiconductor market share to 20% by 2030, an ambitious yet late effort to secure a degree of digital sovereignty (European Commission, 2023). In foundational models, European efforts like France's Mistral AI are vibrant

but still a niche, struggling to compete with the scale and capital of American giants (Chang *et al.*, 2025). The EU's strategy here is defensive: it seeks sovereignty, not dominance.

3.2. The rulemaking race: The battle for the global standard

Beyond hardware, a parallel contest is underway across two dimensions: technical interoperability standards that shape how AI systems connect, and governance norms that define their permissible uses. This bifurcated battle plays to different actors' strengths.

Europe continues to wield significant regulatory influence — what analysts term the “Brussels Effect”. Through its AI Act, which introduces risk-based obligations and strict conformity mechanisms for high-risk AI, the EU is positioning itself as the normative engine of global AI policy. Simultaneously, EU standard-development bodies (like CEN/CENELEC) are working to translate regulatory priorities into technical standards, reinforcing governance through the backdoor of compliance (Siegmann and Anderljung, 2022).

The United States prefers a decentralized, mixed model. American influence runs deep in global standards-setting. U.S. members dominate the IEEE Standards Association board, and American companies hold outsized sway in key international bodies such as the Internet Engineering Task Force and the ISO/IEC committees that define global technology norms. In contrast to the EU's centralized model, U.S. governance norms remain relatively fragmented. Federal frameworks like NIST coexist with specialized regulators such as the FDA for medical AI, creating a patchwork that preserves flexibility at the cost of coherence.

China, meanwhile, fuses governance and sovereignty in its standard-setting strategy. The government actively promotes domestically governed AI frameworks, both in technological protocols and regulatory codes, embodied by its Global AI Governance Initiative and supported by interventions to strengthen indigenous platforms. Its message that AI regulation should prioritize inclusive development and reject geopolitical hegemony resonates especially among Global South nations.

At a macro level, this “standards battle” highlights a key structural divergence: Western democracies generally keep technical and governance rulemaking separate, while China opts for unified state-guided systems. Whether the result is global interoperability or further fragmentation will shape the political architecture of AI for decades to come.

3.3. The battle for the Global South: The quest for hearts, minds, and markets

The Global South — spanning Asia, Africa, and Latin America — is not a passive bystander. It is the arena where the triad's competing visions are accepted, rejected, or blended.

The American offer is framed in terms of values and alignment. Through initiatives like the Partnership for Global Infrastructure and Investment (PGII), Washington offers partnerships rooted in “democratic values”, promising secure, trustworthy technology and integration with Western markets (G7 Research Group, 2024). However, this offer is often coupled with pressure to align with U.S. security priorities, including distancing themselves from Chinese technology, a demand that can conflict with these nations' developmental needs.

The Chinese offer is one of pragmatism and non-conditionality. Through the Digital Silk Road, China provides what many developing economies crave the most: affordable hardware, critical digital infrastructure (from 5G to data centers), and technology transfer without overt political strings attached (Council on Foreign Relations, n.d.). This “laissez faire” approach, focused on tangible infrastructure and economic development, holds significant appeal, though it has raised concerns about debt sustainability and data security among recipients.

The European offer is one of rules and partnerships. The EU seeks to attract the Global South by promoting its regulatory framework as a tool for sustainable and trustworthy digital transformation. It offers capacity-building programs to help nations build their own AI governance systems, often modeled on its own. While respected, this approach can be perceived as paternalistic or overly focused on rights at the expense of rapid growth, limiting its appeal to governments focused on immediate economic gains.

Emerging economies are crafting innovative responses to this fragmentation, forging hybrid models that blend competing great power offerings while asserting local priorities. The African Union's 2024 Continental AI Strategy exemplifies this approach, merging EU-inspired ethical guidelines with Chinese-built digital infrastructure while mandating strict data localization (African Union, 2024). For example, Rwanda has actively introduced advanced Chinese digital infrastructure while enacting the Data Privacy and Protection Law, aiming to establish a robust domestic data governance framework (Ingabire, 2024). Similarly, in Southeast Asia,

Indonesia is methodically building its own regulatory architecture. Building on a personal data protection law inspired by the EU's GDPR, Jakarta is now crafting strategic guidelines for AI use that reflect both local values and investor concerns. These cases reveal a historic shift. From Nairobi to Jakarta, developing nations are no longer passive recipients but active architects, leveraging great power competition to extract technology transfers and policy concessions (Dharmaraj, 2024). Yet the paradox persists. While such hybrid models demonstrate remarkable agency, their long-term viability hinges on overcoming enduring dependencies on foreign core technologies, challenging these nations to transform tactical bargaining into genuine innovation sovereignty.

3.4. The military frontier: AI and the future of conflict

The military application of AI is among the most sensitive frontiers. It has profound implications for global strategic stability. The integration of autonomous systems and AI-enabled decision-making into defense planning is reshaping the security environment.

The United States is accelerating military investment in AI. Programs such as the Department of Defense's *Replicator* initiative seek to deploy large numbers of autonomous systems, aiming to offset potential numerical disadvantages and strengthen battlefield awareness (Defense Innovation Unit, n.d.). Washington has also highlighted AI's role in surveillance, cyber operations, and advanced command-and-control frameworks. While intended to enhance deterrence, these moves raise concerns that rapid automation of decision-making could increase the risk of miscalculation or crisis escalation.

China emphasizes defense modernization under restraint. Beijing has consistently underscored that it pursues a defensive national defense policy and does not seek an arms race (Ministry of National Defense of the People's Republic of China, 2021). Its official discourse stresses the concept of "intelligentized warfare" primarily in the context of modernization, while also highlighting the need for responsible AI development and international cooperation to prevent the misuse of emerging technologies. In multilateral forums, China has called for dialogue on military applications of AI and supported principles of transparency, human oversight, and global governance to reduce the risks of unregulated competition (United Nations, 2025).

The European Union, meanwhile, positions itself as a normative actor advocating restraint. Brussels has championed legally binding rules on autonomous weapons systems and repeatedly called for the preservation of meaningful human control (Kulueva and Bidas, 2025). Yet, given its limited hard-power resources, the EU's influence lies mainly in shaping international norms rather than directly competing in military AI capabilities. It therefore plays a role primarily in norm-setting rather than in capability development.

Together, these arenas — technology, rules, markets, and militaries — constitute the geopolitical chessboard of AI. The outcome of this contest will play a significant role in shaping the future structure of global AI governance and security dynamics.

4. The Consequences: A Fragmented World

The consequences of the triadic contest over artificial intelligence are neither simultaneous nor independent. Instead, they can be understood as a sequential process in which each outcome conditions the next. Intensifying competition over AI capabilities first produces technological decoupling and infrastructural fragmentation, as major powers pursue sovereign control over chips, data, and foundational models. This fragmentation then translates into governance divergence, weakening interoperability, increasing duplication costs, and undermining the institutional conditions necessary for collective innovation and risk management. As coordination erodes at the technological and governance levels, systemic risks are not contained within the competing powers; they may increasingly affect external actors. The cumulative result is a redistribution of uncertainty, dependency, and vulnerability toward actors least equipped to absorb them — most notably countries in the Global South. Taken together, the splintering of the digital ecosystem is not merely a technical phenomenon, but a structural process that reshapes how risk is generated, managed, and ultimately borne in the global AI order.

4.1. The “Splinternet” accelerated: Technological decoupling and digital fragmentation

The most immediate and visible consequence of this triadic contest is the accelerated unraveling of a unified global internet into what is often termed

the “splinternet” — a fragmented patchwork of competing technological spheres. This division operates not as a clean break but as a multidimensional fracturing, reshaping the very architecture of digital globalization.

The decoupling between the United States and China is forcing the development of parallel, mutually exclusive technology stacks. One ecosystem, aligned with U.S. interests, is built upon Nvidia semiconductors, AWS and Azure cloud infrastructures, and models from OpenAI and Meta. Another, within China’s orbit, relies on Huawei’s Ascend chips, Alibaba Cloud, and Baidu’s ERNIE models. Caught between them, the European Union’s pursuit of digital sovereignty risks transforming it into a highly regulated island, or perhaps a third bloc with its own distinct standards for data privacy and interoperability. For multinational corporations, this balkanization imposes costly and inefficient duplications, stifling the economies of scale and serendipitous innovation that a truly global network affords.

The fragmentation extends deeply into the realm of data governance, where the principle of global data flows is rapidly giving way to the assertion of data sovereignty (Glasze *et al.*, 2022). China’s targeted data localization requirements, the European Union’s General Data Protection Regulation (GDPR) — with its emblematic “right to be forgotten” — and evolving U.S. legislation like the CLOUD Act, which seeks to restrict data transfers to “countries of concern,” are creating increasingly segmented data environments. This regulatory divergence inhibits the training of robust, globally representative AI models and hampers international scientific research, which increasingly depends on access to large, diverse, and cross-border datasets.

Moreover, the financial and research ecosystems that fuel technological progress are becoming increasingly siloed. U.S. venture capital, once a global lubricant for innovation, is growing wary of investments in Chinese technology sectors, while Chinese researchers face mounting barriers to collaboration with Western institutions (Karhade *et al.*, 2024). This division weakens the global scientific community, preventing the cross-pollination of ideas that has historically propelled periods of rapid, disruptive technological advancement. The splinternet, therefore, is not merely about market fragmentation, but about the erosion of the global intellectual commons.

4.2. The global innovation dilemma: Duplication, inefficiency, and risk

Against this backdrop, the global innovation dilemma emerges as a second-order consequence of technological fragmentation, as decoupled infrastructures and diverging regulatory regimes undermine interoperability, inflate duplication costs, and erode the institutional foundations for collective innovation and risk governance.

This fragmentation of the global AI landscape presents a profound innovation dilemma, one that manifests as both a tragedy of efficiency and a grave collective action problem (Schmitt, 2022). The triadic race is generating a staggering duplication of effort and investment, as three separate blocs allocate significant resources to developing parallel capabilities: sovereign cloud infrastructures, large-scale foundational models, and advanced semiconductor supply chains. This represents an inefficient allocation of global capital and intellectual resources that could otherwise be directed toward addressing humanity's most pressing challenges, from climate change and pandemic preparedness to energy transition and global health, rather than being consumed by zero-sum geopolitical competition.

Even more critically, this division severely undermines the global governance of frontier risks, most notably the path toward artificial general intelligence (AGI). The development of AGI is fraught with significant uncertainty and potential systemic risks, and managing these risks demands unprecedented levels of international cooperation, transparency, and the establishment of robust, shared safety protocols and alignment standards. The current environment of mutual suspicion and technological decoupling is the direct antithesis of what is required. If the United States, China, and the European Union are not communicating and coordinating on critical issues such as developing fail-safes for out-of-control models or agreeing on rigorous testing protocols, the entire world faces a dramatically elevated level of risk. This dynamic threatens to transform the race into a perverse competition not to the swiftest or the most innovative, but to the most reckless — a classic “tragedy of the commons” scenario unfolding on a global scale.

4.3. The burden of choice: Forcing a new non-aligned movement

As these dynamics extend beyond the core competitors, their pressures are displaced outward, compelling countries in the Global South to absorb the costs and risks generated by technological fragmentation and governance divergence over which they exercise limited control.

For nations outside the core triad — particularly across the Global South — the great AI competition appears less an opportunity than a formidable challenge, imposing what might be termed a new burden of choice. These countries are increasingly compelled to navigate a complex and perilous geopolitical landscape, where their decisions will fundamentally shape their technological futures. A pervasive fear exists that the AI race will merely reproduce a modern variant of digital colonialism, reducing them to dependent consumers of foreign technology and norms (Zia, 2025). In this scenario, their data and markets risk becoming structurally dependent on external technology providers, and choices among American, Chinese, or European technology stacks may be framed as alignment with different external ecosystems, posing potential challenges to digital sovereignty and economic autonomy.

In response, nations from Indonesia and Nigeria to Brazil are actively resisting this binary logic, pursuing sophisticated strategies of multi-alignment. They are deftly cherry-picking partnerships, accepting Chinese infrastructure investment, adopting European-style data protection regulations, and maintaining critical security ties with the United States. While this hedging represents a rational and pragmatic response to profound uncertainty, it constitutes a fragile and high-stakes diplomatic game. It invites considerable pressure and potential retaliation from the great powers, thus consuming immense diplomatic capital that might otherwise be directed toward domestic development priorities.

Perhaps most significantly, this pervasive pressure to choose sides is injecting a potent new source of tension into international relations, effectively dividing the world into competing techno-spheres of influence. These blocs threaten to extend beyond technology into the realms of trade, diplomacy, and security alliances, risking a replay of the Cold War's divisive dynamics within even a more complex and potentially less stable tripartite structure. This inability to forge a unified global front on AI governance does more than create technological inefficiency. It may constrain the world's collective capacity to address other transcendent shared challenges, from pandemic response to climate change, for which coordinated, AI-powered solutions are increasingly becoming essential.

5. Conclusion: Toward a Managed Contest

The central question motivating this paper is whether the divergent AI governance models of the United States, China, and the European Union

can coexist — or whether artificial intelligence will become the fault line of a new digital order defined by incompatible standards and mutual suspicion. The analysis presented here leads to a clear conclusion: these governance models are unlikely to converge, but they can coexist under “managed contest”, a condition in which strategic competition persists, but is bounded by minimal coordination mechanisms, partial interoperability, and shared risk-mitigation norms. Absent such management, AI is indeed likely to harden into a structural fault line, accelerating fragmentation and redistributing risk across the global system.

The preceding analysis reveals a sobering trajectory: the AI contest among the United States, China, and the European Union is accelerating a global drift toward digital fragmentation, normative divergence, and a breakdown of epistemic commons. Yet this contest is unlikely to produce a single hegemonic winner. What lies ahead is not a Cold War-style bifurcation, but a more complex and prolonged era of managed contest — a condition where rivalry, coexistence, and selective cooperation must be navigated in parallel. Such a scenario demands not wishful multilateralism, but pragmatic mechanisms to balance sovereign ambitions with shared survival.

Preventing fragmentation from becoming irreversible requires a shift toward managed contest — a framework in which competition is bounded by minimal but credible guardrails. This begins with foundational trust-building measures, such as a direct emergency communication channel between AI-reliant military systems — an “algorithmic red phone” — modeled after Cold War precedents. The establishment of an international AI Development Fund, perhaps under UN auspices, could reduce capability asymmetries and offer developing countries access to foundational models and compute infrastructure. Moreover, a global AGI registry, requiring transparency from actors engaged in high-risk research, would offer a thin layer of oversight essential to managing frontier risks. These proposals are not intended as comprehensive solutions, but as indicative mechanisms for mitigating cross-border systemic risks in an increasingly interdependent AI landscape.

Encouragingly, early institutional movement is already underway. In August 2025, the General Assembly approved the creation of an *Independent International Scientific Panel on AI*, tasked with providing impartial, evidence-based assessments of global AI capabilities and risks, along with a *Global Dialogue on AI Governance* to convene states, firms, and civil society

(United Nations, 2025). Though still in its infancy, this architecture echoes the need for minimal guardrails and signals a growing recognition that some degree of shared governance is indispensable.

Each of the triadic powers has a distinct role to play. The United States, as the current technological leader, faces increasing pressure to move beyond a posture of strategic denial to institutional stewardship. This entails complementing export controls and alliance-based strategies with leadership in global safety benchmarks, confidence-building measures, and restraint in extraterritorial data and cloud regulation.

China, having advanced its capabilities while emphasizing principles such as cyber sovereignty, data sovereignty, and state-led governance, is facing increasing expectations to make its approach to AI governance more transparent and internationally legible. China's 2023 Global AI Governance Initiative, which stresses that all countries should have equal rights to develop and use AI, reflects a preference for state-centric and context-sensitive governance models, in contrast to governance approaches in the United States and Europe, which are often framed in more universalist terms. This framing, positioning AI governance as an extension of cultural sovereignty, may prove China's most distinctive contribution to the global discourse, though its practical pathways are still inchoate (Racicot and Simpson, 2025).

The European Union, though often sidelined in technological power terms, is uniquely positioned to act as a normative broker and institutional entrepreneur. Its regulatory expertise and initiatives such as Global Gateway could support interoperable governance frameworks, provided that regulatory ambition does not harden into rigid exceptionalism.

Actors beyond the triad — particularly in the Global South — must no longer be treated as passive recipients of technological spillovers or regulatory diffusion. Countries from Brazil to Indonesia are already charting hybrid paths, blending Chinese infrastructure, American cloud services, and European-style rights protections. Preserving this autonomy will require regional coordination, collective bargaining in international fora, and institutional reforms that grant meaningful voice rather than symbolic inclusion in global AI governance.

At its core, the battle over AI is not just a technological arms race — it is a test of systemic restraint. Managed contest is not a truce but a discipline: it requires all players to restrain their worst impulses in order to maintain systemic stability. The alternative — unbounded rivalry amid normative

collapse — risks transforming AI from a tool of global empowerment into an accelerant of division and destruction. We are still early enough in this contest to choose structure over entropy, cooperation over chaos. But the window is narrowing. What is needed now is not consensus, but coexistence with rules — a world of plural stacks, interoperable guardrails, and shared constraints below which none may fall.

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References

- African Union (2024), “Continental Artificial Intelligence Strategy,” August 9, <https://au.int/en/documents/20240809/continental-artificial-intelligence-strategy>.
- Anjali Kaur (2025), “From Divide to Delivery: How AI Can Serve the Global South,” CSIS, October 8, <https://www.csis.org/analysis/divide-delivery-how-ai-can-serve-global-south>.
- Bureau of Industry and Security, U.S. Department of Commerce (2025), “Commerce Further Restricts China’s Artificial Intelligence and Advanced Computing Capabilities,” March 26, <https://www.bis.gov/press-release/commerce-further-restricts-chinas-artificial-intelligence-advanced-computing-capabilities>.
- Charlotte Siegmann and Markus Anderljung (2022), “The Brussels Effect and Artificial Intelligence: How EU Regulation Will Impact the Global AI Market,” Centre for the Governance of AI, August 16, <https://www.governance.ai/research-paper/brussels-effect-ai>.
- Council on Foreign Relations (n.d.), “Assessing China’s Digital Silk Road Initiative,” <https://www.cfr.org/china-digital-silk-road/>.
- Defense Innovation Unit (n.d.), “Replicator,” <https://www.diu.mil/replicator>.
- European Commission (2023), “European Chips Act,” September 21, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/european-chips-act_en.
- European Commission (2024), “European Union Artificial Intelligence Act,” June 13, <https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai>.
- G. Glasze *et al.* (2022), “Contested Spatialities of Digital Sovereignty,” *Geopolitics*, 28(2): 919–958.
- G7 Research Group (2024), “Factsheet on the G7 Partnership for Global Infrastructure and Investment (PGII),” G7 Development Ministers’ Meeting, October 23, <https://www.g7.utoronto.ca/dev/2024-annex-i-gpii.html>.
- Graham Allison (2015), “The Thucydides Trap: Are the U.S. and China Headed for War?” *The Atlantic*, September 24, <https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/files/Allison%20C%202015.09.24%20The%20Atlantic%20-%20Thucydides%20Trap.pdf>.

- Graham Allison and Eric Schmidt (2020), "Is China Beating the U.S. to AI Supremacy?" Project Syndicate, August, <https://www.belfercenter.org/publication/china-beating-us-ai-supremacy>.
- Human-Centered Artificial Intelligence (2024), Artificial Intelligence Index Report (2024), Stanford University, https://hai.stanford.edu/assets/files/hai_ai-index-report-2024-smaller2.pdf.
- Kyle Chan, Gregory Smith, Jimmy Goodrich, Gerard DiPippo, and Konstantin F. Pilz (2025), "China's Evolving Industrial Policy for AI," RAND, Expert Insights, June 26, <https://www.rand.org/pubs/perspectives/PEA4012-1.html>.
- L. Schmitt (2022), "Mapping Global AI Governance: A Nascent Regime In A Fragmented Landscape," *AI and Ethics*, 2: 303–314, <https://doi.org/10.1007/s43681-021-00083-y>.
- Lanie Albert (2024), "A Cross-Sectional Comparison of EU, China, and US Artificial Intelligence Policy Landscapes," Plurus Strategies, May 6, <https://www.plurusstrategies.com/insights/2024/5/6/a-cross-sectional-comparison-of-eu-china-and-us-artificial-intelligence-policy-landscapes-1>.
- Ministry of Foreign Affairs (2023), "Global AI Governance Initiative," People's Republic of China, October 20, https://www.fmprc.gov.cn/eng/wjb/zzjg_663340/jks_665232/kjfywj_665252/202310/t20231020_11164834.html.
- Ministry of Foreign Affairs (2025), "Global AI Governance Action Plan," People's Republic of China, July 26, https://www.fmprc.gov.cn/eng/xw/zyxw/202507/t20250729_11679232.html.
- Ministry of National Defense of the People's Republic of China (2021), "China Unswervingly Pursues Defensive National Defense Policy," March 1, http://eng.mod.gov.cn/xb/News_213114/NewsRelease/4880163.html.
- Morgan Sullivan (2023), "Global AI Regulation: A Closer Look at the US, EU, and China," Transcend, October 19, <https://transcend.io/blog/ai-regulation>.
- Paula Ingabire (2024), "Rwanda's Data Governance: Navigating Data Governance in the Public Sector," Brookings, May 2, <https://www.brookings.edu/articles/rwandas-data-governance-navigating-data-governance-in-the-public-sector/>.
- Prasanna Karhade, Hongfei Li, and Arun Rai (2024), "Stifling or Stimulating Innovation: US–China Tech Rivalry and the Reallocation of Venture Capital in China's Core Technology Sector," November 25, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5033038.
- Raphael Racicot and Kurtis Simpson (2025), "China's AI Governance Initiative and Its Geopolitical Ambitions," Centre for International Governance Innovation, July 22, <https://www.cigionline.org/articles/chinas-ai-governance-initiative-and-its-geopolitical-ambitions/>.
- Sabina Kulueva and Agata Bidas (2025), "Towards Comprehensive Regulation: The EU's Stance on Autonomous Weapons and the Need for Reform," European Student Think Tank, May 2, <https://esthinktank.com/2025/05/02/towards-comprehensive-regulation-the-eus-stance-on-autonomous-weapons-and-the-need-for-reform/>.

- Samavia Zia (2025), "Digital Colonialism: Reimagining Power, Identity, and Resistance by Decolonizing AI," Yayasan Drestanta Pelita Indonesia, April, pp. 129–147, <https://publisher.yayasandpi.or.id/index.php/dpipress/article/view/1722>.
- Samaya Dharmaraj (2024), "Indonesia Aligns AI Regulations with Global Standards," OpenGov Asia, November 25, <https://archive.opengovasia.com/2024/11/25/indonesia-aligns-ai-regulations-with-global-standards/>.
- Stefan Bartl (2025), "The Global AI Race: the US Creates, China Copies, and the EU Regulates," The Daily Economy, March 11, <https://thedailyeconomy.org/article/the-global-ai-race-the-us-creates-china-copies-and-the-eu-regulates/>.
- The State Council of the People's Republic of China (2023a), "Guanyu shenru shishi 'dongshuxisuan' gongchen, jiakuai goujian quanguo yitihua suanliwang de shishi yijian," December 25, https://www.gov.cn/zhengce/zhengceku/202401/content_6924596.htm.
- The State Council of the People's Republic of China (2023b), "Shengchengshi rengongzhineng fuwu guanli zanxing banfa," July 10, https://www.gov.cn/zhengce/zhengceku/202307/content_6891752.htm.
- The State Council of the People's Republic of China (2025), "Guowuyuan guanyu shenru shishi 'AI Plus' xingdong de yijian," August 26, https://www.gov.cn/zhengce/content/202508/content_7037861.htm.
- U.S. Senate Judiciary Committee, Subcommittee on Privacy, Technology, and the Law (2023), "Developing and Deploying AI Responsibly: Elements of an Effective Legislative Framework to Regulate AI," September 12, https://www.judiciary.senate.gov/imo/media/doc/2023-09-12_pm_-_testimony_-_smith.pdf.
- United Nations (2024), "Enhancing International Cooperation on Capacity-Building of Artificial Intelligence," July 5, <https://docs.un.org/en/A/RES/78/311>.
- United Nations (2025), "Terms of Reference And Modalities For The Establishment And Functioning of the Independent International Scientific Panel on Artificial Intelligence and the Global Dialogue on Artificial Intelligence Governance," August 26, <https://docs.un.org/en/A/RES/79/325>.
- United Nations (2025), "Artificial Intelligence in the Military Domain and its Implications for International Peace and Security," June 5, <https://documents.un.org/doc/undoc/gen/n25/107/66/pdf/n2510766.pdf>.
- Wendy Chang, Rebecca Arcesati, and Antonia Hmaidi (2025), "China's Drive Toward Self-Reliance In Artificial Intelligence: From Chips to Large Language Models," Mercator Institute for China Studies, July 22, <https://merics.org/en/report/chinas-drive-toward-self-reliance-artificial-intelligence-chips-large-language-models>.
- Youtong Liu (2025), "Between Dependency and Autonomy: Brazil's Engagement in Global Artificial Intelligence Governance under the US-China Tech Rivalry," Vanguard Think Tank, July 14, <https://vanguardthinktank.org/multilateralism-no-more-the-impact-of-the-us-election-on-the-un-1>.