

Artificial Intelligence Governance: Comparing U.S. and French Approaches for Iran

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Abstract

The rapid transformation in the field of artificial intelligence (AI), particularly following the emergence and proliferation of generative AI in 2022, has reshaped power dynamics in the international system, positioning this technology as a central pillar of power, security, and governance in the emerging global order. Within this context, the United States and France—representing distinct discursive paradigms (American market-oriented liberalism and European law-centered continentalism)—have adopted divergent approaches to AI governance, reflecting a strategic competition over the architecture of the future technological order. This study employs an analytical-comparative approach and a qualitative methodology based on the examination of official documents, national strategies, and policy frameworks to investigate and compare the developments and initiatives of the United States and France from 2022 to 2025. The innovation of this research lies in its integration of conceptual analysis with structural-institutional assessment, identifying strategic gaps between the two governance models and elucidating their international implications in shaping global AI norms. The findings indicate that the United States, emphasizing market dynamism, industry self-regulation, and a facilitative governmental role, pursues a flexible and innovative governance model. Through the influence of leading corporations and industrial standards, it seeks to globally propagate its light-touch regulatory approach. In contrast, France, aligned with the European Union, emphasizes proactive regulation, active industrial policy, and substantial investment, advancing a law-centered, value-driven model aimed at safeguarding technological sovereignty and promoting responsible AI development. The comparative analysis reveals that beyond differences in governance philosophy, the two approaches diverge significantly in institutional structures, modes of engagement with the private sector, degree of government intervention, and participation in multilateral initiatives. This divergence has contributed to the emergence of a global regulatory duality and challenges in achieving international consensus, although geopolitical pressures arising from competition with China have created opportunities for functional convergence. The study concludes that this competition encompasses not only technological but also normative and civilizational dimensions, potentially leading over the long term to the development of a hybrid and balanced model that combines the strengths of both the American and European frameworks in shaping the future architecture of AI governance.

Keywords: Artificial intelligence governance, active industrial policy, risk-based regulation, industry self-regulation, technological governance.

Introduction

The rapid evolution of artificial intelligence (AI) has ushered international power relations into a new phase, which can be characterized as a "great power competition in the age of AI." Unlike previous eras, where hard power components—such as weapons or natural resources—served as the primary drivers of geopolitical competition, in the emerging global order, advanced technologies and AI, particularly following the accelerated development of generative AI since 2022, have become central levers of power, security, and governance (Schmidt et al., n.d.). This paradigmatic shift has prompted states to redefine their national strategies, perceiving AI not merely as a technical tool but as a fundamental element in shaping the future geopolitical architecture. Within this context, the United States and France, as two strategic actors representing distinct discursive paradigms—American liberalism and European continentalism—have adopted differentiated approaches to AI governance, reflecting a broader contest over leadership in the global technological order.

This transformation can be analyzed through the lenses of neorealism and liberal institutionalism, in which technology is treated as an independent variable influencing the distribution of power and shaping the dynamics of conflict or cooperation among states. Simultaneously, in the field of technology studies, AI is regarded as a transformative general-purpose technology with unparalleled potential to restructure the world's economic, political, military, and social systems. Accordingly, examining national strategies for AI governance is not only critical for understanding responses to technological risks but also has implications for the formation of international norms, power balances, and the evolution of global institutions. This study seeks to address the following research question: what conceptual, structural, and strategic differences exist between the United States and France in AI governance, and how do these differences affect the global technological order and international AI governance norms? In response, this paper employs an analytical-comparative approach to examine the domestic, regional, and international dimensions of the two countries' AI policies, aiming to identify the mechanisms of technological power generation and emerging forms of both soft and hard competition in this domain.

The significance of this topic can be explained from two perspectives. First, from a strategic standpoint, AI governance plays a decisive role in shaping future national power, geopolitical

competition, and the global order. States capable of directing emerging technologies in alignment with their interests can not only enhance their international standing but also influence the establishment of global norms. Second, from a theoretical perspective, a comparative study of these two distinct governance approaches provides an opportunity to test conceptual frameworks such as the "Brussels effect," "technology-driven industrial policy," and the "liberal technological order," thereby enriching the theoretical literature on technology governance.

This study employs a qualitative, library-based research design to examine AI governance in the United States and France. Data were collected from official policy documents, institutional portals (including NIST, the White House OSTP, French government websites, and EU institutions), and peer-reviewed academic sources. The search strategy focused on keywords such as artificial intelligence, governance, national strategy, technology policy, and the EU AI Act. Sources were selected based on credibility, relevance, and timeliness. The analysis involved a systematic comparative examination of conceptual frameworks, regulatory instruments, institutional arrangements, and innovation policies across the two cases. The study identifies key similarities and differences between the two governance models and assesses their international implications.

1. The United States' Strategy in Artificial Intelligence Governance

As a global technology leader, the United States has adopted a multidimensional, yet largely flexible and market-oriented, approach to AI governance. Unlike the European Union, which emphasizes comprehensive AI legislation, the U.S. has not enacted an overarching federal law on AI, instead relying on existing sectoral frameworks and regulations (Harris, 2025). In other words, the American approach to AI is decentralized and sector-specific. Rather than implementing top-down regulation, AI governance in the U.S. is shaped through existing institutions and laws across various sectors, such as finance, healthcare, and transportation (Chun et al., 2024). This approach reflects policymakers' preference for fostering innovation and supporting industry self-regulation. A prominent example is the National Institute of Standards and Technology (NIST) AI Risk Management Framework, published in January 2023, which provides voluntary guidance to organizations for identifying and mitigating risks associated with AI systems (AI Risk Management Framework | NIST, 2025).

In October 2022, the White House released the Blueprint for an AI Bill of Rights, outlining five core principles—safety and efficacy, algorithmic non-discrimination, data privacy, transparency and disclosure, and the availability of human alternatives—aimed at protecting user rights in the AI era. Although these principles and frameworks were non-binding, they reflected the Biden administration's emphasis on guiding AI development within the framework of U.S. civil and legal values (The White House, 2023).

Conversely, approximately one year into his presidency, Donald Trump issued the American AI Action Plan on July 10, 2025, directly challenging Biden's minimalist, safety-focused regulatory approach. The plan called for an assertive response to the United States' security, geopolitical, and economic concerns regarding China's growing AI capabilities. It was built around three key pillars: accelerating the development of physical AI infrastructure and energy supply, minimizing legal obstacles for technology companies, and consolidating U.S. global technological leadership (AI Action Plan, 2025).

From the perspective of investment and technological competition, the U.S. strategy focuses on maintaining innovation leadership and global technological preeminence, particularly in competition with China (Schmidt et al., n.d.). Through large-scale research funding, private-sector incentives, and talent acquisition, the U.S. seeks to accelerate AI development. For example, the CHIPS and Science Act of 2022 allocated substantial resources to AI and semiconductor research (United States Congress, 2022).

In the realm of national security, U.S. strategic documents emphasize the significance of AI, and numerous initiatives aim to integrate AI into military operations and cybersecurity (Shinego, 2025). Furthermore, the United States actively engages in technological diplomacy, participating in forums such as the Organisation for Economic Co-operation and Development (OECD) and the G7 to develop strategic principles for AI. Through the U.S.–EU Trade and Technology Council, the U.S. has also taken steps to align standards and terminology with the European Union (Harris, 2025).

However, the U.S. stance diverges markedly from Europe regarding the degree of AI regulation (Roberts & Floridi, 2021). U.S. representatives have historically been cautious about certain international initiatives with binding ethical requirements. At the 2025 Global AI Action Summit in Paris, U.S. Vice President J.D. Vance expressed concern about “overregulation,” warning that

excessive restrictions could stifle innovation and weaken U.S. leadership. He stated, "AI is the engine of future economic growth, and the United States cannot cede the field to competitors through excessive regulation." In line with this perspective, the U.S. refrained from signing a non-binding statement on safe, secure, and trustworthy AI, which was endorsed by approximately 60 countries, including France, Germany, India, and China. Many experts view this stance as indicative of the U.S. emphasis on regulatory flexibility to preserve competitive advantage and avoid international obligations that might constrain innovation in emerging AI technologies (Roucy-Rochegonde, 2025).

In summary, the United States' AI governance strategy combines domestic innovation encouragement and industry self-regulation with selective engagement in global initiatives, prioritizing leadership and standards rooted in U.S. values.

2. France's Strategy in Artificial Intelligence Governance

As a leading European power, France has adopted a distinct approach to AI governance that is closely aligned with the European Union. The French national AI strategy, "AI for Humanity," was first launched in 2018 following the recommendations of the renowned Villani report. From the outset, the strategy was backed by an investment of €1.5 billion between 2018 and 2022, laying the foundations for a robust AI research and innovation ecosystem in France. Key initiatives included the creation of a network of four interdisciplinary AI institutes known as the 3IA Centers, the establishment of Chairs of Excellence, and specialized doctoral programs in AI. The primary goal of this initial phase was to consolidate scientific capacity and begin the development of national technology hubs (La Stratégie Française En Intelligence Artificielle, 2024). Since 2022, France has entered the second phase of its national strategy, reinforced under the ambitious France 2030 program (France 2030, n.d.). In this phase, the strategy focuses on expanding AI applications across industries and training highly skilled human capital. By promoting "advanced domestic and sovereign AI solutions," France seeks simultaneously to strengthen technological sovereignty and regain digital independence. The second phase revolves around three main pillars: investment in research and education to cultivate top talent, support for frontier AI products and services developed by French companies, and closer integration between technology providers and industry to accelerate AI adoption in the economy. A defining feature of France's

approach is its emphasis on technological and social sustainability, prioritizing energy-efficient AI, trustworthy AI, and responsible AI behavior (La Stratégie Française En Intelligence Artificielle, 2024).

In recent years, the emergence of large language models and other generative AI systems has prompted France to devote special attention to these technologies. In 2023, the Macron administration introduced a dedicated component of the national strategy focused on generative AI, supporting the country's "national champions" in this field. The intellectual foundation for this direction was reinforced by the 2024 report of the French National AI Commission, "AI: Our Ambition for France," which called for France to become a major player in the AI revolution (IA: notre ambition pour la France, 2024). Consequently, initiatives such as enhancing critical infrastructure, constructing new supercomputers, developing domestic foundational models, creating national data repositories, and providing open-source tools for evaluating and deploying generative AI have been prioritized by the government (La Stratégie Française En Intelligence Artificielle, 2024). In terms of investment scale, a recent announcement by President Emmanuel Macron marked a significant milestone. Following the AI Action Summit held in Paris in February 2025, Macron unveiled a €109 billion investment plan for AI. This unprecedented funding, covering data and computing centers, startup support, research, and computational infrastructure enhancement, aims to bolster Europe's computational capacity and establish France as a leading AI power (Elysee, 2025). In parallel, France has undertaken institutional measures in public policy. National coordination of research activities under the AI strategy has been assigned to the French National Institute for Digital Research, which, in collaboration with industrial and academic stakeholders, facilitates strategy implementation (Artificial Intelligence and Learning: Research at the Heart of AI, 2024).

France possesses a long-standing tradition of striving for technological independence and superiority, with roots traceable to the Napoleonic era. In modern history, France has consistently sought to maintain parity with major powers in scientific and industrial domains, and in certain areas, to achieve leadership. This drive for technological advancement has become an integral part of the national identity and political discourse. Examples range from Napoleonic-era scientific reforms, such as the establishment of elite technical institutions and the promotion of an engineering-based educational system, to major Fifth Republic technological

initiatives, including the Ariane space program and nuclear energy development. In the contemporary period, the discourse of technological sovereignty has gained particular prominence in France. French leaders argue that national capacity to master key technologies is essential for preserving political and economic sovereignty. Emmanuel Macron has explicitly identified technology as a top strategic priority, asserting that France's real sovereignty in the twenty-first century is linked to technological advancement and the reduction of dependency on foreign powers (Fischer, 2022). In his speeches, Macron promotes the concept of "digital and technological European sovereignty," positioning France as a leading force in Europe's strategic autonomy vis-à-vis the technological giants of the United States and China (Macron Defends the Idea of European Sovereignty, 2018). Accordingly, while France welcomes investment by major American corporations, such as Google and Microsoft, to create jobs and stimulate economic growth, it simultaneously enforces strict measures against monopolistic practices. Examples include the €1.1 billion fine imposed on Apple in 2020 and the conditional provision of foreign cloud services in 2021, requiring collaboration with French companies under the "trusted cloud" initiative—both efforts aimed at safeguarding French digital sovereignty against foreign influence (Fischer, 2022).

Across the historical trajectory from Napoleon, who laid the foundations of France's scientific-military power, to Macron, who seeks to position France as Europe's leading technological power, a consistent line of thought emerges: the belief in the necessity of technological leadership for national greatness. In Macron's discourse, the goal of transforming France into an AI power is explicitly emphasized. He argues that France and Europe must occupy the center of the AI revolution and serve as a global hub or bridge in competition with international rivals (Sommet Pour L'action Sur L'intelligence Artificielle, 2025). In his speeches, Macron repeatedly underscores that France and Europe can be at the heart of the economic transformation driven by technological development, provided they assert themselves as AI powers in the global competition. This narrative effectively links France's historical pride with a forward-looking technological vision. Consequently, France's technological competition discourse rests on a combination of historical legacy—including the Napoleonic spirit in industry and science—technological nationalism, and a core principle of digital sovereignty, framed within European

multilateralism aimed at guiding the continent toward technological independence (Fischer, 2022).

As a founding and influential member of the European Union, France plays a key role in shaping EU policies, particularly in the technological and digital domains. The country's national AI governance efforts are directly synergistic with broader EU strategies. Paris has recognized that leveraging the EU as a platform can significantly amplify the reach and impact of its technological policies. Consequently, France has strategically aligned its national technological objectives with European initiatives (France - National Strategy for AI, 2023). A prominent example of this alignment was France's rotating presidency of the Council of the European Union in the first half of 2022, during which the Macron government prioritized European digital sovereignty on the EU agenda. France proposed four pillars for European digital sovereignty: fostering Europe's independent innovation capacity, establishing regulations to ensure fair competition and corporate accountability, promoting open technologies and standards, and protecting European citizens' data and security. This conceptual framework reflects France's national priorities, including innovation, regulation, open standards, and data sovereignty, scaled to the European level (Fischer, 2022). In practice, France has been both an initiator and supporter of several strategic and legislative initiatives at the EU level that strengthen Europe's technological ecosystem. For instance, France has financially supported major joint European investment projects in areas of shared European interest, such as semiconductor manufacturing and cloud computing, contributing €8 billion to these initiatives (Lafrance & Wehrmann, 2023). Additionally, in collaboration with 17 other EU countries, France launched the European Technology Investment Fund with a budget of €10 billion, aimed at providing European startups in growth stages with the capital needed to scale within Europe. These measures align with Macron's vision of fostering at least ten European tech giants each valued over €100 billion by 2030 (What Is ETCI?, 2023).

On the regulatory front, France has consistently been a driving force behind new EU legislation. Two notable examples are the Digital Markets Act and the Digital Services Act, designed, respectively, to curb the power of major platforms and regulate online content. France played an active role in shaping and advancing these laws, with both final approvals occurring during its presidency of the Council of the EU (EU Digital Markets Act and

Digital Services Act Explained, 2025). Most importantly, the EU Artificial Intelligence Act—the world's first comprehensive AI regulatory framework—was proposed in 2021, adopted in June 2024, and became enforceable in August 2024. Built on a risk-based regulatory approach, France was an early and staunch supporter of the Act, advocating for strict standards, particularly in high-risk AI domains. At the same time, France supported flexibility for open-source projects, such as the French company Mistral, to mitigate potential negative impacts on European AI innovators (Roucy-Rochegonde, 2025). Overall, France perceives itself as a *de facto* political and technological leader within the EU, a status largely acknowledged by other European countries. Initiatives such as European Talent Services, aimed at attracting foreign experts, and the European Initiative for Digital Resources, designed to develop shared data infrastructure and open-source software, have been propelled by France's leadership in EU policy-making (Fischer, 2022). France has also been at the forefront of strengthening EU cybersecurity, advancing amendments to the Network and Information Systems Directive (NIS2) during its Council presidency (NIS2 Directive: Securing Network and Information Systems, n.d.). This comprehensive leadership has positioned France in Brussels as a key driver of digital policy. Importantly, these efforts are motivated not only by European idealism but also by French national interests, as a technologically strong Europe reinforces France's competitive position in the global arena.

3. Comparative Analysis

Although the United States and France share the overarching objective of achieving technological leadership in the AI era, their strategies in AI governance exhibit profound conceptual, institutional, and strategic differences rooted in each country's foundational models of technology governance. At the conceptual level, the U.S. emphasizes market dynamism, industry self-regulation, and innovation facilitation, whereas France prioritizes anticipatory regulation, active industrial policy, and government-led steering of technological processes. These differences extend beyond the choice of regulatory tools and mechanisms, reflecting two distinct traditions of thought and governance philosophy concerning the relationship between the state, the market, and technology. From a macro perspective, the U.S. strategy can be characterized as market-oriented, flexible, and innovation-driven. In this model, the government primarily functions as a facilitator—

investing in fundamental research and public infrastructure—while the bulk of technology development and implementation is borne by the private sector. By contrast, France's strategy, aligned with the broader European Union frameworks, can be described as state-centered, rule-based, and values-driven. In this approach, the government acts not only as a regulator but also as an active leader of technology policy, employing state investment, specialized institutions, and market guidance to secure public interests, ensure social sustainability, and maintain technological sovereignty (Chun et al., 2024).

From a regulatory perspective, another fundamental difference emerges between the two strategies. The European Union, led in large part by France, adheres to a model of preventive, principle-based regulation. The EU Artificial Intelligence Act (AI Act) provides a clear manifestation of this approach. The Act adopts a top-down, risk-based model, imposing stringent legal requirements tailored to the potential risk level of each AI application. For instance, applications deemed to carry an "unacceptable risk," such as mass biometric surveillance or social scoring, are entirely prohibited (Harris, 2025). In contrast, the United States has so far avoided comprehensive federal legislation and has preferred a gradual, bottom-up approach, leveraging existing sectoral laws and non-binding guidelines. This model focuses on steering and encouraging adherence to safety and ethical principles through voluntary standards, without imposing strict legal obligations (Schmidt et al., n.d.). As a result of this divergence, Europe currently possesses a binding and comprehensive framework applicable across all member states, whereas in the U.S., the legal architecture for AI governance remains fragmented, incomplete, and in development. The roots of this difference lie in each side's understanding of the balance between safety and innovation (Chun et al., 2024). Europe, emphasizing fundamental values such as human rights, social justice, and public trust, regards early government intervention in regulation as both an ethical and structural necessity. By contrast, the United States is concerned that stringent regulations, especially in the early stages of technological development, may slow the pace of innovation, undermine global competitiveness, and cause the country to fall behind rivals, particularly China.

Europe's detailed and strict regulations may unintentionally reduce private investment incentives, encourage the relocation of innovative companies to more flexible jurisdictions, and ultimately

weaken Europe's position in the global AI race. Conversely, the U.S. regulatory model—relying on self-regulation, post hoc oversight, and an open experimentation space—creates a more favorable environment for startups and technological creativity. Nevertheless, this approach is not without challenges, including weaker oversight, risks of algorithmic bias, and potential public distrust (Chun et al., 2024). It is noteworthy that Europe's stringent approach stems from its prior successes in other regulatory domains, particularly personal data protection. EU leaders hope that the AI Act, like the General Data Protection Regulation (GDPR), will become a global gold standard, compelling other countries to comply—a phenomenon widely referred to in international policy literature as the "Brussels Effect." Under this dynamic, third countries or multinational corporations seeking access to the European market are effectively required to adopt its strict standards, thereby exporting European legal norms and regulatory practices to a global scale (Bradford, 2020).

In the dimension of innovation and industrial support, a clear strategic gap is observable between the United States and France. The United States has adopted a market-oriented approach with minimal government support, in which the state primarily functions as a facilitator and enabler. In this model, initiative largely rests with the private sector; the U.S. government seeks to smooth the path for technological innovation by funding fundamental research, supporting long-term military or space projects, and providing tax incentives, without directly intervening in the market. Prominent examples of this approach include the establishment of national AI research centers at leading universities, support for pioneering projects under the Defense Advanced Research Projects Agency (DARPA) in advanced algorithm development, and the implementation of the CHIPS and Science Act to strengthen the supply chain for critical technologies (Bradford, 2023). By contrast, France and the European Union follow a state-centered approach with active industrial policy, in which the government functions not only as a facilitator but also as a strategic market leader. In this model, the state shapes the innovation ecosystem by setting strategic priorities, investing directly, and designing coordination mechanisms across research, industrial, and financial institutions. Notable examples of this approach include France's France 2030 initiative and large-scale EU programs such as Horizon Europe, which aim not only to advance technology but also to reinforce technological sovereignty and reduce dependence on foreign

powers. Within this framework, French policymakers seek to cultivate "industrial champions" in AI by injecting financial resources into domestic startups, establishing industry–university consortia, and enhancing national computational capacities (Bradford, 2023).

From the perspective of institutional frameworks and patterns of engagement in international AI governance, significant differences emerge between the approaches of the United States and France, reflecting divergent philosophies regarding multilateral institutions and their influence on global normative order. France and the European Union generally display a stronger orientation toward multilateralism, collective rule-making, and transnational institution-building. This tendency is rooted both in Europe's historical commitment to a rules-based and systematized order and in the EU's institutional and legal structure, which obliges member states to define and implement policies within a coordinated, multilateral framework (Carbone, 2021). Within this framework, France has played an active role in leveraging international institutions to shape global AI governance norms. Initiatives such as the Global Partnership on AI, established in collaboration with Canada, and France's key participation in designing and promoting the Paris 2025 Agreements on responsible AI development, illustrate Paris's view of global governance not merely as a threat to national sovereignty, but as an opportunity to export European values and strengthen France's role in the architecture of the global digital order (Fischer, 2022). Furthermore, EU membership effectively situates French technology policy in a transnational context, requiring adherence to common standards, consensus-driven mechanisms, and collective rules.

By contrast, the United States, while actively engaged in major international institutions such as the Organisation for Economic Co-operation and Development (OECD), the G7, and the G20—and having played a pivotal role in their establishment and leadership—has consistently sought to preserve strategic autonomy in decision-making. Washington adopts a selective and interest-driven approach to multilateral initiatives, joining only those agreements that align with domestic priorities and market-oriented policy logic (Secen, 2025). A clear example of this approach is the U.S. refusal to sign certain multilateral statements on responsible AI development, including the Paris AI Action Summit Declaration and the non-binding Safe and Trustworthy AI Support Agreement. This abstention reflects structural caution in Washington regarding

international commitments that might constrain national regulatory flexibility or the competitiveness of U.S. technology. At a macro level, Europe (with France at the center) aims to position itself as a "rule architect" in the international order, whereas the primary concern of the United States remains maintaining leadership. This divergence results in a dynamic of simultaneous competition and cooperation in transatlantic interactions.

However, rapid technological change and growing global concerns about the social, ethical, and security implications of AI have created areas of relative convergence across the Atlantic. Both parties now regard AI not merely as a strategic technology, but as a pillar of geotechnological competition with China. Consequently, transatlantic cooperation in standardization, research, and technological security has gained prominence (Tréhu et al., 2024). Initiatives such as the EU-U.S. Trade and Technology Council, efforts to harmonize terminology and definitions for emerging technologies, and negotiations under the G7 Hiroshima Process—which specifically addressed generative AI governance—demonstrate an increasing recognition of the need for targeted collaboration, despite conceptual differences in governance models. In other words, although Europe and the United States still diverge on how to balance innovation, ethics, regulation, and competition, geopolitical pressures arising from China's technological ascent, the risks of military or authoritarian AI applications, and the need to reconstruct the international technology order are driving them toward a form of "functional convergence." This convergence may, in the future, serve as the foundation for a new international framework for AI governance.

4. Strategic Implications

The competition and divergence between the United States and France in AI governance carry profound and wide-ranging consequences for the global technological order and the process of international rule-making in this domain. One of the most significant implications is the potential emergence of a global regulatory duality, in which the world faces two contrasting regulatory models: the European law-centric, stringent approach and the flexible, market-oriented, U.S. self-regulatory approach. This divide risks polarizing global standards, disrupting technological convergence, and complicating the establishment of common rules. Both powers are actively seeking to consolidate the international predominance of their respective models. Europe, leveraging its discourse on human

rights, social responsibility, and citizen protection, aims to export its framework as the model for ethical and safe AI development. In contrast, the United States emphasizes the benefits of unfettered innovation, regulatory flexibility, and rapid economic growth to encourage other countries to follow its model. This duality reflects a deeper contest not merely over governance tools, but over values and philosophical approaches to technology policy.

This situation recalls historical experiences of standard-setting competition in areas such as telecommunications, the Internet, data security, and aerospace, where global powers used technical, diplomatic, and economic leverage to impose or promote preferred standards. Given AI's system-shaping character, a similar competition is now emerging, potentially leading to structural cleavages in global technology governance.

In the short term, the EU has an opportunity to capitalize on the "*Brussels Effect*." Just as the EU's General Data Protection Regulation (GDPR) set global benchmarks for privacy protection, the European AI Act has the potential to become a reference framework for countries such as India, Brazil, Indonesia, and several African states. These countries closely monitor EU legal and institutional developments to extract adaptable policy templates for national AI governance.

Conversely, the United States wields powerful tools to exert its regulatory model de facto worldwide. The unparalleled global reach of U.S. technology companies—Google, Microsoft, Amazon, Meta—across digital infrastructure, from social media platforms to cloud services and generative AI tools, constitutes a strategic lever for American influence. These firms not only propagate their technical and security standards globally, but also, through lobbying networks, participation in industrial standard-setting, and influence on national legal regimes, steer other countries toward simpler, voluntary, and flexible frameworks.

As a result, a covert yet intense competition unfolds: Europe relies on a top-down, law-centric regulatory pathway, while the United States leverages industrial influence and operational standards to shape the future global AI order. The outcome of this contest depends not only on the legal and technological capabilities of both actors, but also on the acceptance of these models by third countries, the persuasive power of ethical and economic discourses, and the ability to offer governance frameworks that balance innovation and safety.

A second major consequence of the U.S.–EU strategic divergence in AI governance is the growing challenge to forming meaningful and effective international cooperation. Differences in visions, regulatory styles, and policy priorities across the Atlantic introduce structural obstacles to consensus-building, undermining the efficacy of multilateral initiatives. This divergence has been evident in recent international forums: while over sixty countries—including France, Germany, India, and many Global South states—signed the *Paris Statement on Inclusive and Sustainable AI*, endorsing principles such as algorithmic fairness, transparency, and accountability, the United States and several others, including the United Kingdom, abstained. This decision reflects not merely technical or ethical disagreements, but the deeper contest over normative authority, the framing of international obligations, and leadership in establishing global rules.

Even when concerns such as the military applications of AI, misinformation, or systemic algorithmic bias are shared, competition over regulatory dominance obstructs binding agreements or even credible political declarations. This tension can resonate across international institutions, including the United Nations, UNESCO, the International Telecommunication Union, and the OECD, presenting a scenario in which two conflicting voices emerge from within the Western bloc. Such fragmentation may particularly affect developing countries formulating initial AI governance frameworks, causing confusion, policy delays, or selective adoption of approaches aligned with perceived national interests.

Nevertheless, the U.S.–France divergence is methodological rather than purposive: both countries agree on the need for responsible, safe, and human-centered AI. The primary difference lies in institutional design, type of commitments (hard vs. soft), and the level of state intervention in innovative processes. These methodological distinctions do not imply a permanent rupture; in many cases, bridging mechanisms are possible.

A key bridging mechanism involves creating technical and normative linkages between the two approaches. The *U.S.–EU Trade and Technology Council* exemplifies such efforts, seeking to establish a shared vocabulary, unified classification, and technical roadmap for AI development and assessment. Beyond standardization, this initiative enhances strategic mutual understanding between regulators on both sides of the Atlantic. If successful, it could facilitate a form of *gradual convergence* between the U.S. market-oriented and European law-centric models,

driven by efficiency, shared interests, and the need for coordinated responses to global challenges.

A third strategic consequence of U.S.–France competition is the role of third actors exploiting internal Western divergences. Foremost among these is the People's Republic of China, as a structural rival to the Western democratic order. China's distinctive model—combining centralized state control, political authority, and accelerated industrial development—prioritizes political stability, state security, and instrumental use of technology to achieve central government objectives.

The emergence of such a model shifts the U.S.–Europe contest from an *intra-civilizational dispute* to an *emergency coalition against an external threat*. While Washington and Paris remain deeply divided over regulatory frameworks, private-sector engagement, and state intervention in the innovation ecosystem, they share structural interests in confronting Beijing's authoritarian AI paradigm. Consequently, in global forums such as the G7, the OECD, and AI-specific conferences, a “Democracies vs. Digital Authoritarianism” alignment frequently emerges. Joint statements by the U.S. and France opposing the misuse of AI for human rights violations, mass surveillance, or political consolidation exemplify attempts to build a Western consensus against normative divergence.

However, this potential alignment remains fragile in the absence of a coherent institutional framework. Persistent or deepening policy gaps between the U.S. and Europe could create strategic openings for China, enabling it to extend technological, normative, and political influence in developing countries. Initiatives such as the *Digital Silk Road*, the export of surveillance technologies, and a governance model requiring neither democratic accountability nor transparency demonstrate China's efforts to offer a compelling alternative, particularly attractive in Asia, Africa, and Latin America, compared with the stringent European or high-risk American approaches.

Thus, the U.S.–France gap is not merely political or technical but carries geostrategic and normative implications for the international order. Any Western coordination vacuum effectively expands the maneuvering space of rivals, particularly if China succeeds in forging coalitions of states favoring minimal oversight of sovereign AI applications, such as domestic surveillance, population control, or state cybersecurity, potentially creating a *soft global bloc* opposed to Western governance principles.

Ultimately, the U.S.–France competition in AI governance embodies dual, intertwined dynamics. On one hand, it generates structural challenges for global governance; on the other, it serves as a catalyst for innovation, standard enhancement, and institutional advancement. This duality complicates international interactions in emerging technologies while providing opportunities to test, balance, and refine governance models.

The coexistence of two fundamentally different regulatory paradigms—the flexible U.S. self-regulatory model and the stringent, value-driven European model—produces a global regulatory divergence, potentially undermining international policy coherence, standard harmonization, and multilateral institutional efficiency. Yet, this competition also constitutes a strategic opportunity: each actor is incentivized to continuously improve performance, governance, and normative credibility. Europe, leveraging its legal heritage, promotes a responsible, transparent, human-centered AI model, shaping global norms; the U.S., to maintain technological primacy, invests in key areas, accelerates frontier innovation, and consolidates control over global infrastructure.

In the long term, this interaction may foster a form of *dialectical convergence* through conflict, cooperation, and mutual learning. Positive elements from both models—the U.S. emphasis on innovation, flexibility, and market efficiency, and the European focus on human-centeredness, accountability, and fundamental rights—could gradually merge into a balanced international AI governance framework. Achieving such equilibrium depends on several key factors, including geopolitical dynamics, public pressures regarding safety and algorithmic fairness, and ongoing technological evolution.

What is clear, however, is that competition in the AI era is not merely about resources or territory. It encompasses normative and civilizational dimensions, determining the principles of governance, the definition of humanity in the algorithmic age, and the contours of future international order. AI thus represents not only a transformative technology but also a field for geopolitical realignment, where the rules of the global system will emerge from the very dynamics of strategic competition, alliances, and confrontations.

5. Lessons for Iran

The strategic competition between the United States and France in

AI governance demonstrates that sustainable success in this domain is achieved neither solely through reliance on free-market logic nor through full-scale state intervention. Rather, it requires an intelligent institutional architecture that fosters innovation by allowing regulatory flexibility while systematically strengthening the country's infrastructural, institutional, and human capacities through targeted industrial policy. For the Islamic Republic of Iran—subject to technological sanctions and global supply chain disruptions—the optimal strategy lies in adopting a hybrid model that balances elements of the *American regulatory flexibility* with the *French law-driven industrial approach*. Such a strategy establishes a deliberate and balanced process: on one hand, creating low-risk experimental spaces for technological trial and error to nurture innovation, and on the other, implementing a transparent, decisive, and measurable regulatory framework for high-risk applications that may have direct and sometimes irreversible impacts on fundamental rights, public security, and market stability.

This combined strategy should pursue a clear, long-term objective: achieving technological sovereignty in the Islamic Republic of Iran across strategic layers of data, computation, and standards, without confining the national innovation ecosystem in a cage of ambiguous, fragmented, or obstructive regulations.

At the infrastructural level, AI policy must integrate with energy, industry, and communications strategies to develop scalable governance computing capacities. Rather than relying passively on unreliable imported processors, a diversified computing resource chain should be established, including national processing clusters, heterogeneous hardware utilization, software optimization for existing capacity, and energy-efficient data centers. This effort gains significance when the government, as the primary consumer, sends stable demand signals for high-quality domestic solutions through intelligent public procurement, thereby shortening the commercialization pathway. Effectiveness depends on independent mechanisms for evaluating model safety and performance and the establishment of testing and evaluation hubs in priority sectors such as healthcare, finance, transportation, and digital government, reducing the gap between research, products, and market adoption.

At the governance level, Iran requires a framework aligned with its core values and that clearly operationalizes the responsibilities of stakeholders. The framework's core should include explicit classification of applications by risk, proportional requirements for each class, conformity assessment systems, and technical

traceability. Particularly in high-risk applications, legal obligations should mandate data documentation, model registries, risk-proportionate explainability, and third-party audit capabilities. Fragmented legislation across sectoral bodies leads to regulatory inflation and conflicts; a horizontal regulatory authority with rule-making, oversight, and inter-sectoral coordination powers is essential. This body should be *“industry-listening” yet socially accountable*, employing soft regulatory tools such as technical guidelines, voluntary frameworks, and time-bound sandboxes alongside hard instruments like licensing and enforcement mechanisms.

At the data governance and public trust level, the European experience shows that without effective data governance and a trust architecture, neither the digital market can scale nor emerging technologies gain social legitimacy. For Iran, the primary priority is a transparent and forward-looking national data policy that establishes functional and operational distinctions among public, governmental, sensitive, and personal data. Within this framework, an independent institution—the *“Data Trustee”*—should act as a trusted intermediary, enabling controlled access for researchers and industry through *purpose-based permissions*. Simultaneously, the legal system must be updated to substantively protect privacy, information security, and stakeholder rights, aligned with AI ecosystem requirements.

To accelerate the development of Persian and multilingual language models and reduce technological gaps in low-resource languages, the national data policy should focus on creating high-quality data repositories, publishing domestic evaluation models, and supporting targeted production and dissemination of open-source models. This approach lowers innovation costs and enhances national technological resilience against global value chain disruptions. The data policy must also include institutionalized transparency and accountability regimes, ensuring that the public sector exemplifies responsible, equitable, and trust-building AI use, thereby strengthening social trust foundations in the technological ecosystem.

At the strategic and geopolitical level, sustainable advantage in geotechnological competition is achieved when a country attains the status of *“rule architect”* in its peripheral circuits rather than merely following rules set by others. For Iran, this entails active engagement in technical and normative standardization, leveraging the country's scientific, academic, and industrial capacities, as well as targeted participation in regional mechanisms. Advancing mutual

recognition and equivalence in conformity assessments can transform “*costs imposed by isolation*” into “*intelligent levers for technological influence*”.

Simultaneously, to systematically manage security and cognitive risks within the AI ecosystem, a specialized institution with a “*cognitive defense and algorithmic security*” mandate is essential. This body should continuously monitor threats such as supply chain leaks or tampering, misuse of generative technologies, data-based and content-based attacks, and intelligence operations in smart environments. It must design, update, and operationalize legal, technical, and procedural mechanisms to counter these threats, enforceable across governance levels.

In summary, these lessons are not merely technical recommendations but constitute strategic imperatives. By combining *regulatory agility* and *industrial authority*, establishing *data sovereignty* and a *trust architecture*, and engaging actively in *standardization* and *cognitive defense*, Iran can transform its AI ecosystem into a sustainable driver of economic growth, social welfare, and national security—not through rhetoric, but via transparent rule design, targeted and measurable resource allocation, and institutions that guide rather than constrain innovation.

Conclusion

The findings of this study indicate that AI governance models in the United States and France reflect two distinct philosophies regarding the relationship among the state, the market, and technology. This divergence does not merely manifest in differences in tools and instruments but extends to a fundamental gap in policymaking logic. The United States, relying on market mechanisms, industry self-regulation, and a facilitating role for the state, creates a flexible environment for innovation and leverages the influence of leading companies and operational standards to propagate a “light-touch” regulatory model globally. In contrast, France, in structural alignment with the European Union, emphasizes proactive regulation, active industrial policy, and substantial investment, seeking through integrated, value-driven legislation to ensure technological sovereignty and social accountability. These two logics converge and diverge across conceptual, institutional, regulatory, and technological dimensions, producing uneven international outcomes. The comparative analysis reveals that this duality is fostering a form of regulatory bifurcation: Europe, leveraging the “Brussels Effect,” increases its normative influence

through binding rules, whereas the United States, backed by its infrastructure and major corporations, *de facto* globalizes operational and industrial standards. This normative tension slows multilateral consensus-building, generates inconsistencies in risk definition and management, and complicates alignment across transnational value chains and innovation ecosystems. Nevertheless, geopolitical pressures stemming from competition with China, along with shared concerns regarding safety, security, and public trust in generative technologies, have created avenues for functional convergence across the Atlantic. If pursued through shared technical language, mutual recognition mechanisms, and harmonized oversight arrangements, such convergence could reduce gaps without erasing distinct regulatory identities. The strategic implications of these findings for the emerging global order are clear. First, U.S.–France/EU competition over AI governance is not merely technical or economic but possesses a normative and civilizational dimension, encompassing the boundaries of acceptable applications and the degree of state involvement in guiding technology. Second, today's policy choices establish path dependencies that shape innovation trajectories, investment patterns, computational geography, and data flows, ultimately affecting states' capacities to access markets, attract investment, and participate in standard-setting. Third, third-party actors—particularly China and a number of Global South countries—exploit transatlantic divergences to advance alternative narratives; thus, the quality of transatlantic coordination indirectly influences the appeal of non-liberal governance models. In the long-term perspective, the most probable scenario for AI governance is the emergence of a hybrid, balanced model that combines the innovation-oriented flexibility of the American approach with the institutional accountability, transparency, and protection of fundamental rights characteristic of the European model. Achieving this requires stable platforms for interaction between the two governance regimes, based on common risk classification systems, mutual acceptance of conformity assessment procedures, minimal alignment of regulations in high-risk domains, and enhanced transparency and traceability along foundational model value chains. Such a level of convergence could transform the existing competition from a potentially exhausting regulatory and normative confrontation into a catalyst for improving the quality of global AI governance, ultimately enabling safe, equitable, and sustainable utilization of this transformative technology within the international system.

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