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The Transatlantic AI Divergence: Comparing the European Union's Risk-Based Regulation and the United States' Deregulatory Model

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Abstract
This article examines the transatlantic divergence in the governance of Artificial Intelligence between the European Union and the United States of America, and analyzes how differing regulatory philosophies and priorities have shaped their policies. The EU has developed a horizontal risk-based approach centered on the Artificial Intelligence Act and complemented by the GDPR, DSA, and DMA, with the dual objective of fostering AI development while safeguarding the rights of its citizens. The United States has embraced a decentralized, market-oriented approach, guided primarily by executive action and sector-specific oversight aiming at enhancing American leadership in the development of this new technology. The analysis examines how the EU's classification-based regulatory model has imposed significant compliance burdens, constraining the development of a competitive domestic AI ecosystem. It identifies structural weaknesses in the EU's risk-based framework, including ambiguity in high-risk classification, regulatory inflexibility in the face of rapid technological advance, and costly conformity assessments that disproportionately burden startups and SMEs. The article concludes by proposing a set of targeted reforms, some inspired by the U.S. model, aimed at enhancing Europe's competitiveness: transitioning toward a principle-driven regulatory model, replacing ex-ante certification with post-market monitoring, easing data-access constraints, strengthening proportionality mechanisms for SMEs, and integrating AI infrastructure into the EU's broader industrial and energy strategies. These reforms seek to preserve the European Union commitment to ethical and rights-based governance while enabling it to become a significant actor in the AI global race.

Keywords: Artificial Intelligence, AI, AI regulation, EU AI Act, GDPR, U.S. AI policy, AI competitiveness, Startups, AI strategy, Data governance, AI infrastructure, Innovation policy, AI policy.

1. Introduction

As artificial intelligence (AI) advances and its use becomes embedded across nearly every sector of the global economy, we find ourselves on the verge of a transformation comparable in scale and impact with the Industrial Revolution.[1] From AI-driven robotics capable of performing complex manufacturing tasks to sophisticated machine-learning models reshaping financial services,[2] the sheer scale of the economic and social change that this new technology will bring is poised to reshape the world.

Countries are directing significant resources toward building innovative and robust domestic AI ecosystems, determined to secure their place in this emerging economic landscape. As a new race to the moon begins in mastering and leading artificial intelligence, regulatory policy has moved to the forefront of public debate, aiming to reconcile the push for rapid technological advancement with the need to uphold the core values that should guide its evolution.

In this context, a clear transatlantic divergence has emerged between the European Union (EU) and the United States (U.S.). The EU has pursued a rights-based and precautionary regulatory framework anchored in strong public oversight, while the U.S. has favored an innovation-oriented, decentralized, and market-driven model.

Meanwhile, the first outcomes of the global AI race already reveal a decisive American lead. By 2024, U.S.-based institutions had produced 40 notable AI models, compared to just three in Europe, reinforcing a decade-long trend of American primacy in machine learning innovation.[3] This leadership is overwhelmingly driven by private investment: in 2023, the United States attracted €67.2 billion ($78.25 billion) in AI funding, while the EU secured only €7.22 billion ($8.41 billion),[4] and by 2024, U.S. investment had surged to $109.1 billion, further widening the transatlantic gap.[5] The disparity is even more pronounced in generative AI, where the U.S. has attracted 88.97% of total global investment between 2019 and 2024.[6] The entrepreneurial landscape reflects a similar imbalance, with 1,143 new AI companies established in the United States in 2024 compared to 447 in Europe.[7]

Public investment has surged on both sides of the Atlantic, but the pace has been far from equal. In 2023 alone, the United States awarded $830.9 million in AI-related public contracts, compared with Europe's $581.4 million.[8] The U.S. entered the race much earlier and moved faster: between 2013 and 2023 it allocated $5.223 billion, issued 2,678 AI-related contracts, and reached a global record of public investment in AI of $1.58 million for every one hundred thousand inhabitants.[9] Over the same period, the European Union dedicated only $515.85 million.[10]

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[1] Tim Mucci, 'The Future of AI: Trends Shaping the Next 10 Years' (IBM, 2024)

[2] Rob Toews, '5 AI Predictions for the Year 2030' *Forbes* (10 March 2024)

[3] Stanford Institute for Human-Centered Artificial Intelligence, *Artificial Intelligence Index Report 2025*, ch 1, s 1.3, page 46.

[4] Stanford Institute for Human-Centered Artificial Intelligence, *Artificial Intelligence Index Report 2024*, ch 4, s 4.3, page 249.

[5] European Parliament, *AI investment: EU and global indicators* (European Parliamentary Research Service Briefing, 27 March 2024)

[6] Stanford Institute for Human-Centered Artificial Intelligence, *Artificial Intelligence Index Report 2025*, ch 4, s 4.3, page 255.

[7] Stanford Institute for Human-Centered Artificial Intelligence, *Artificial Intelligence Index Report 2025*, ch 4, s 4.3, page 258.

[8] Stanford Institute for Human-Centered Artificial Intelligence, *Artificial Intelligence Index Report 2025*, ch 6, s 6.3, page 358

[9] Stanford Institute for Human-Centered Artificial Intelligence, Artificial Intelligence Index Report 2025, ch 6, s 6.3.

[10] Stanford Institute for Human-Centered Artificial Intelligence, Artificial Intelligence Index Report 2025, ch 6, s 6.3.

In this context, the widening divide between the United States and the European Union in artificial intelligence development raises important questions about the drivers of American leadership and the extent to which the European regulatory model may have constrained the Union's competitive capacity in this rapidly evolving field.

This article analyses the structural differences underpinning both approaches, evaluates the shortcomings of the current European model, and ultimately advances a set of targeted reforms to the EU's regulatory framework, designed to strengthen competitiveness while preserving the Union's commitment to ethical and rights-based governance.

2. The EU's Risk-Based Regulatory Framework for AI

In the absence of binding international regulation on digital standards, the European Union sought to position itself as a global regulatory power[11] by extending the *Brussels Effect*[12] to emerging technologies such as AI, aiming for third countries to adopt its rules through both a *de jure* dimension, where states model their legislation on EU standards; and a *de facto* dimension, where companies worldwide voluntarily align with EU norms even without domestic legal requirements.[13]

Accordingly, the EU has crafted a comprehensive regulatory framework for AI, intending it to serve as the benchmark for global implementation.

The origins of the EU's regulation of AI lie in the *White Paper on Artificial Intelligence*,[14] which established the policy goal of promoting AI innovation inside the Bloc while ensuring its development would be compliant with EU law and safeguard fundamental rights. From these core principles, the Union's policy evolved into a highly codified framework that established specific rules for different aspects of the digital market. AI regulation now rests primarily on the *Artificial Intelligence Act* (AI Act),[15] complemented by the *General Data Protection Regulation* (GDPR),[16] the *Digital Services Act* (DSA),[17] and the *Digital Markets Act* (DMA),[18] creating a cohesive digital regulatory ecosystem.

2.1. The Artificial Intelligence Act

The AI Act represents the world's first comprehensive horizontal framework for the regulation of AI. It serves as the cornerstone of the EU's AI governance system, establishing harmonized rules across all 27 Member States.

[11] Ioanna Hadjiyianni, 'The European Union as a Global Regulatory Power' (2021) 41(1) *Oxford Journal of Legal Studies* 243.

[12] Anu Bradford, *The Brussels Effect: How the European Union Rules the World* (Oxford University Press 2020).

[13] Michael Dan Birnhack and Guy Mundla, 'The Brussels Effect(s) and the Rise of a Privacy Profession' (2025) *International Data Privacy Law 1.*

[14] European Commission, *White Paper on Artificial Intelligence: A European Approach to Excellence and Trust* COM(2020) 65 final, 19 February 2020 (European Commission).

[15] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144, and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act) [2024] OJ L 202/1.

[16] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation) [2016] OJ L119/1.

[17] Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market for Digital Services and amending Directive 2000/31/EC (Digital Services Act) [2022] OJ L 277/1.

[18] Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act) [2022] OJ L 265/1.

The Regulation adopts a risk-based approach divided into four tiers that classifies AI systems according to the level of risk they pose to fundamental rights; establishing for each tier the legality of specific applications, the corresponding compliance obligations, and the penalties applicable in case of infringement.

The first tier encompasses AI practices deemed incompatible with Union values and fundamental rights and are, therefore, strictly prohibited.[19] These include biometric categorization of sensitive attributes such as political or religious affiliation, real-time biometric identification in public spaces for law enforcement purposes, and predictive policing based solely on profiling.

The second tier includes high-risk AI systems, which are allowed under the Regulation but subject to stringent compliance requirements. This category follows a *numerus clausus*[20] which the European Commission may update by adding or removing use cases.[21] It includes, among others, AI systems for creditworthiness assessments, educational tools used to evaluate students' performance, and systems designed to support judicial decision-making.

The third tier consists of AI systems that do not pose a threat to fundamental rights but nonetheless present transparency and autonomy concerns.[22] Undertakings must ensure that users understand when they are interacting with an AI system and that they are not misled regarding its capabilities.

The fourth tier includes minimal-risk AI, which encompasses spam filters, non-sensitive recommendation systems, and basic analytical tools.[23] These systems are not subject to binding obligations under the AI Act, though the regulation encourages voluntary codes of conduct.[24]

The Regulation also introduces a proportionality mechanism to support small and medium-sized enterprises and startups with the possibility of halving its applicable fines if the infringement was neither deliberate nor repeated.[25]

2.2. The GDPR, DMA and DSA

The GDPR significantly affects the advancement of AI in two key aspects. On the one hand, as the training and operation of AI models rely on large volumes of data, developers must comply with the GDPR's requirements for the collection and processing of information. On the other hand, the GDPR prohibits automated decisions when those decisions produce legal or significant effects.[26]

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[19] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, ch II, art 5.

[20] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, annex III.

[21] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 7.

[22] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, ch IV, art 50.

[23] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, recitals 71–73, art 69.

[24] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 95.

[25] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 99(4).

[26] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 22.

While the DMA and the DSA are not primarily focused on AI, both include provisions that directly affect its operation. The DSA governs how online platforms handle digital content and impose transparency obligations that influence AI systems used in content moderation and recommendation mechanisms.

The DMA, in turn, regulates how AI-driven algorithms can be deployed by large digital platforms, with the objective of preventing unfair practices and ensuring competitive digital markets.

3. The United States' Decentralized and Market-Driven Approach to AI Governance

The United States has adopted a decentralized, market-driven approach to the regulation of AI, prioritizing innovation, the rapid development of the technology and the preservation of its competitive edge over global competitors.

To realize this vision, the U.S. has refrained from adopting comprehensive horizontal federal legislation that would create a uniform framework for AI governance, instead depending on a fragmented combination of executive guidance and sector-specific oversight. Presidential administrations shape AI policy through executive orders and national frameworks[27] that guide federal agencies in implementing and enforcing relevant laws within their respective domains.[28] Simultaneously, states have begun enacting their own AI legislation,[29] while courts continue to adjudicate a growing range of AI-related disputes.[30]

Current U.S. AI regulation is the product of the past two administrations, which, despite differing philosophies and policy approaches, have consistently prioritized the consolidation of a strong domestic AI sector, while assigning varying degrees of interest in addressing the technology's potential negative externalities.

3.1. The Biden Administration

The Biden Administration was marked by the introduction of the first federal framework for AI governance in the U.S., Executive Order 14110 on the *Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence*.[31] It sought to ensure the responsible development of artificial intelligence by directing federal agencies to establish safety standards, and reinforcing oversight to protect civil rights and national security. This was followed by Executive Order 14141 on *Advancing United States Leadership in Artificial Intelligence Infrastructure*,[32] addressing the rising energy demands of AI by authorizing the leasing of federal lands for gigawatt-scale data centers. Finally, the *White House*

[27] Hadrien Pouget and Matt O'Shaughnessy, 'Reconciling the US Approach to AI' (May 2023).

[28] Matt O'Shaughnessy and Matt Sheehan, 'Lessons from the World's Two Experiments in AI Governance' (14 February 2023).

[29] Bryan Cave Leighton Paisner, 'US State-by-State Artificial Intelligence Legislation Snapshot' (BCLP, 2025)

[30] See: (1) 'AI Copyright Wars, Lawsuits, Map of AI Copyright Lawsuits' (ChatGPT Is Eating the World, 25 August 2024); (2) Jennifer Johnson *et al*, 'US Tech Legislative, Regulatory & Litigation Update – First Quarter 2024' (Inside Privacy, 4 April 2024); (3) Jennifer Johnson *et al*, 'US Tech Legislative, Regulatory & Litigation Update – Second Quarter 2024' (Inside Privacy, 31 July 2024).

[31] Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence (President Joseph R Biden Jr, October 2023).

[32] Executive Order on Advancing United States Leadership in Artificial Intelligence Infrastructure (President Joseph R Biden Jr, 2024).

Blueprint for an AI Bill of Rights,[33] a soft law instrument outlining five principles for responsible AI deployment.

3.2. The Trump Administration

The Trump Administration has marked a clear departure from the previous administration by signaling that it prioritizes advancing AI over regulating it. It has issued the *Executive Order on Removing Barriers to American Leadership in AI*,[34] fundamentally redirecting U.S. federal AI policy toward a model that maximizes innovation and accelerates AI deployment, as it conceives American leadership in the development of this new technology as a matter vital to national security and economic competitiveness.

This shift resulted in the rescission of Executive Order 14110, which the Trump Administration viewed as overly restrictive for the development and deployment of AI, effectively eliminating any near-term prospects for comprehensive federal regulation. The administration has also signaled its intention to abandon the *Blueprint for an AI Bill of Rights*, even as it retains Executive Order 14141 to support the infrastructure needed for sustaining long-term progress in AI.

Central to its new approach, the White House unveiled *Winning the Race: America's AI Action Plan*[35] as a comprehensive roadmap to consolidate the United States' global leadership in artificial intelligence. The Plan articulates more than ninety policy objectives for AI around three pillars.

Pillar one focuses on advancing U.S. leadership in AI technologies. It calls on federal agencies to reduce regulations that unnecessarily hinder AI innovation[36] and to review enforcement actions that could delay technological progress.[37]

Pillar two addresses the physical foundations required to sustain large-scale AI development. It seeks to streamline permitting processes for data centers, semiconductor manufacturing,[38] and energy infrastructure. In this sense, it introduces environmental exemptions and facilitates access to federal lands to expedite construction.[39]

Pillar three aims to extend U.S. technological leadership globally while countering adversarial influence, particularly from China.[40] It advocates for the creation of a "*full-stack*" AI export strategy that enables the United States to provide its allies[41] with AI advances, while tightening export controls on chips and semiconductor manufacturing components to strategic competitors.[42]

In parallel, the administration issued three executive orders that aim to operationalize the Plan: Preventing Woke AI in the Federal Government,[43] Accelerating Federal Permitting of Data Center Infrastructure,[44] and

[33] The White House, *Blueprint for an AI Bill of Rights: Making Automated Systems Work for the American People* (October 2022).

[34] Executive Order on Removing Barriers to American Leadership in Artificial Intelligence (President Donald J Trump, 11 February 2019).

[35] The White House, *Winning the Race: America's AI Action Plan* (23 July 2025).

[36] The White House, *Winning the Race: America's AI Action Plan* (23 July 2025) page 3.

[37] The White House, *Winning the Race: America's AI Action Plan* (23 July 2025) page 3.

[38] The White House, *Winning the Race: America's AI Action Plan* (23 July 2025) pages 16–18.

[39] The White House, *Winning the Race: America's AI Action Plan* (23 July 2025) pages 14–15.

[40] The White House, *Winning the Race: America's AI Action Plan* (23 July 2025) pages 20–23.

[41] The White House, *Winning the Race: America's AI Action Plan* (23 July 2025) page 20.

[42] The White House, *Winning the Race: America's AI Action Plan* (23 July 2025) pages 20–21.

[43] Executive Order on Preventing Woke AI in the Federal Government (President Donald J Trump, 2025).

[44] Executive Order on Accelerating Federal Permitting for Data Center Infrastructure (President Donald J Trump, 2025).

Promoting the Export of the American AI Technology Stack.[45]

3.3. State Regulation

In the absence of comprehensive federal legislation, States have stepped in to fill the regulatory void.

California has emerged as the leading regulatory frontrunner, enacting laws on generative AI, deepfakes, and automated decision-making,[46] while Colorado has introduced a horizontal framework under its AI Act.[47]

However, this momentum could be curtailed under President Trump's *AI Action Plan*, which explicitly discourages "*burdensome*" state regulation and proposes withholding federal funding from states that adopt restrictive AI laws.[48]

4. Structural Limitations of the EU's Risk-Based Model

The European Union's model for AI regulation is built on the premise that governing AI is not merely a matter of overseeing another economic sector, but of recognizing the profound societal significance of this technology. As emphasized in Recital 6 of the AI Act:

"Given the major impact that AI can have on society and the need to build trust, it is vital for AI and its regulatory framework to be developed in accordance with Union values."

Therefore, the EU approaches AI not only as a regulatory challenge but as a civilizational project, it recognizes AI's capacity to reshape society and seeks to embed its own values into the technology's development so that, once deployed, those values serve as its guiding principles.

To this end, the Union has enacted a strict regulatory framework that aims to foster AI innovation but under the values it considers inherent to the European project: fundamental rights, protection of health, safety, democracy, the rule of law, and the environment.[49] At the same time, it acknowledges the potential harmful effects of AI and places strong emphasis on preventing such risks before they materialize into concrete threats, given their possible societal impact.

This policy philosophy crystallizes in the current regulatory model, which is structured around the AI Act's exhaustive classification of high-risk systems. While its objective is to prevent the development of potentially dangerous AI applications, the practical implementation of this framework reveals significant structural shortcomings that ultimately undermine the Bloc's competitiveness.

By relying on a static and overly prescriptive list, the framework lacks the agility necessary to respond to the

[45] Executive Order on Promoting the Export of the American AI Tech Stack (President Donald J Trump, 2025).

[46] See, for California initiatives on artificial intelligence: (1) regarding generative AI: California Assembly Bill 2013, Relating to Artificial Intelligence Safety and Transparency (State of California, 2024); (2) regarding deepfakes: California Assembly Bill 2655, Relating to Election Integrity and AI-Generated Content (State of California, 2024); California Assembly Bill 621, Relating to Civil Actions for Pornographic Deepfakes (State of California, 2024); California Senate Bill 926, Relating to Artificial Intelligence and Non-Consensual Intimate Images (State of California, 2024); California Senate Bill 981, Relating to Digital Identity Theft and Social Media Platforms (State of California, 2024); and (3) regarding automated decision-making: California Consumer Privacy Act 2018 (State of California, AB 375).

[47] Colorado Artificial Intelligence Act, SB 24-205 (State of Colorado, enacted 17 May 2024).

[48] The White House, *Winning the Race: America's AI Action Plan* (23 July 2025) pillar 1, page 3.

[49] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, recitals 6–7.

rapid evolution of AI and imposes disproportionate and costly compliance obligations.

The compartmentalized risk classification system has proven to be under-inclusive and overly rigid, with studies indicating that around 40% of AI systems cannot be clearly classified under the current framework.[50] Certain AI applications posing serious risks to public interests or fundamental rights may fall outside the "*high-risk*" category, while others with lesser impact may still face heavy regulation. In economic and governance terms, this ambiguity undermines legal predictability, increases compliance costs and litigation risks, and discourages innovation while failing to offer consistent protection for individuals.

Although the Act introduces two mechanisms to solve this deadlock: (i) allowing the Commission to update the list of high-risk systems and (ii) enabling providers to self-assess exemptions; both are limited in responsiveness.

The Commission's power to reclassify AI systems is intended to make the AI Act more agile by allowing updates to the list of high-risk systems in Annex III, either by adding new use cases that present comparable risks or removing those that pose no danger.[51] However, this mechanism faces two key limitations. First, the Commission can only act within the eight predefined areas of Annex III,[52] which do not cover all potential AI applications, leaving many emerging technologies outside its scope. Second, the delegated act procedure is slow and politically constrained, since both the European Parliament and Council can object within a three-month period (extendable to six).[53] This makes the process unduly slow to respond to the rapidly evolving challenges posed by new AI models.

Furthermore, the statutory exemption and self-assessment system available to AI providers also presents severe limitations. This provision exempts certain AI systems from the high-risk category when they are designed for certain specific porpoises.[54] Although the European Commission retains final authority to confirm or amend such exemptions, the mechanism relies on a dangerous incentive. It entrusts the regulated entities with determining their own regulatory exposure, seriously compromising the objectivity of risk classification.

Under its current structure, the AI Act places extensive and costly obligations on providers of AI systems. Namely; requiring them to establish and maintain a comprehensive risk management framework,[55] implement data governance

[50] J Gerlach, 'A I Act: Risk Classification of AI Systems from a Practical Perspective: study to identify uncertainties of AI users based on the risk classification of more than 100 AI systems in enterprise functions' 2023 Appl AI 38.

[51] EU AI Act (n 15) Art. 7.

[52] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 7(1)(a).

[53] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 97(6).

[54] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 6(3).

[55] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, arts 9(1), (2) and (4).

mechanisms,[56] ensure record keeping,[57] transparency,[58] and human oversight,[59] and to conduct a formal conformity assessment before placing their systems on the market.[60] These measures impose significant financial burdens on companies. Estimates indicate that achieving full compliance could cost between €193,000 and €330,000 ($210,000–$360,000) per AI system.[61] Such expenses limit the ability of startups to innovate and remain competitive both within the EU market and overseas.

5. Toward a Competitive European AI Framework: Policy recommendations

The Commission is reportedly preparing to delay and simplify certain provisions of the AI Act to enhance the Bloc's competitiveness and reduce regulatory burdens as a part of a forthcoming Digital Omnibus package.[62] The plan includes a one-year grace period for companies deploying high-risk or generative AI systems, postponement of fines for transparency breaches until 2027, and the centralization of enforcement within the new EU AI Office.

Short-term adjustments will not resolve the regulation's structural shortcomings. The Union needs a horizontal regulatory framework for AI, one that remains faithful to the principles set out in the *White Paper on Artificial Intelligence* and that genuinely enables the development of a robust European AI sector while ensuring the protection of fundamental rights.

5.1. A new principle-driven system

The European Union should transition from a prescriptive, category-based model toward a principle-driven approach.

The existing system, anchored in an exhaustive list of high-risk applications, has proven ill-suited to address the speed and unpredictability of AI innovation. In contrast, a principles-based model, similar to the approach adopted under the Biden Administration's *Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence*, would enable regulation to evolve in tandem with technological progress.

This framework would enable policymakers to define the core of AI regulation while empowering sectoral authorities to issue context-specific guidance and technical standards. By tailoring regulatory requirements to the specific realities of each field, it would reduce bureaucratic complexity and ensure that regulation remains effective to the reality on the ground. Additionally, this decentralized model would enhance regulatory agility, allowing the EU to respond rapidly to technological advances through different specialized agencies while maintaining a consistent core of essential stipulations regarding

[56] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 10.

[57] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 12.

[58] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 13.

[59] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 14.

[60] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 43.

[61] CECIMO, 'Paper on the Artificial Intelligence Act' (2022) 4; Centre for Data Innovation, 'How Much Will the Artificial Intelligence Act Cost Europe?' (July 2021) 8.

[62] European Commission, 'Commission collects feedback to simplify rules on data, cybersecurity and artificial intelligence in the upcoming Digital Omnibus' (Press Release, 16 September 2025).

protection of fundamental rights, transparency, accountability, and security.

Beyond the structure of the Regulation, the EU can further strengthen its domestic AI sector by introducing targeted policies in key areas, notably: (i) conformity assessments, (ii) data governance, (iii) startup regulation, and (iv) the development of AI-related infrastructure.

Firstly, regarding conformity assessments. The EU should replace the current *ex-ante* conformity assessment[63] procedures, replacing costly pre-market certification[64] with post-market monitoring, where oversight intensifies as real-world risks materialize. Such a model would substantially lower the entry barriers for bringing new AI systems into the market. This will, in turn, greatly benefit startups and SMEs, which are disproportionately burdened by high compliance costs. Additionally it would enable authorities to address concrete harms as they arise rather than hypothetical risks.

Secondly, data governance. Data is essential for the development of artificial intelligence, yet, the EU's current regulatory framework, shaped by the GDPR, DMA, and DSA, imposes rigid and duplicated constraints on how data can be obtained, used, and stored; as the Draghi Report accurately detected.[65]

While the EU's strategy of developing "*European data spaces*"[66] aims to facilitate structured and secure data sharing, its heavy emphasis on governance and control contrasts with the competitive realities of the private sector, where data constitutes a key strategic asset. Overregulation of access to data benefits dominant global players, practically all of them non-European that already possess vast datasets, in detriment of European companies and startups, limiting their capacity to compete.

The Union should ease data access restrictions by introducing greater flexibility, particularly within the GDPR framework. This objective could be reached through two approaches.

The EU could implement a targeted relaxation of certain compliance requirements applicable to all undertakings operating within the internal market, thereby enabling firms to access and process larger volumes of data.

Alternatively, with the aim of leveling the playing field between European companies and foreign actors that already benefit from extensive data repositories due to more permissive domestic regimes, the Union could establish a multi-tiered framework. Such a system would distinguish between intra-bloc and extra-bloc entities while creating proportionality mechanisms for European firms, reducing their barriers to data access.

Thirdly, startup regulation and governance. Given that technological innovation in the AI sector is primarily driven by startups that scale rapidly, the EU must ensure that its regulatory environment enables, rather than constrains, growth of said companies.

[63] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 43.

[64] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 44.

[65] Mario Draghi, The future of European competitiveness – A competitiveness strategy for Europe (European Commission, 9 September 2024).

[66] European Commission, A European Strategy for Data COM(2020) 66 final, 19 February 2020.

Building on the leniency provisions in the AI Act,[67] the Union could expand the current 50% fine-reduction threshold, introduce payment moratoriums and extend the current reductions for minor infringements until firms reach a defined growth stage.

It could also establish a formal regime of proportionate compliance obligations for SMEs, drawing on the proportionality principle set out in the DMA.[68] Such measures could include simplified documentation and reporting duties and streamlined market entry procedures.

Finally, drawing inspiration from the U.S. *Executive Order on Advancing United States Leadership in Artificial Intelligence Infrastructure*, the EU should explicitly integrate AI development into its broader industrial and energy strategies.

Fourth, the expansion of AI infrastructure should be integrated into the EU's industrial policy and treated as a strategic priority. A holistic industrial strategy should be adopted that addresses AI across its entire value chain, from (i) data centers and (ii) the energy systems required to power them, to (iii) the manufacturing of semiconductors on European soil.

(i) Data centers play a pivotal role in AI development and are essential to its large-scale deployment. The EU must prioritize the expansion of data infrastructure. Building on emerging models such as *AI Factories*,[69] the Union should promote integrated facilities that combine data storage and high-capacity computing.

(ii) Regarding the need to expand energy infrastructure to accommodate the surging power demand driven by AI expansion, the scale of the challenge demands decisive action. In Europe alone, energy consumption by AI-dedicated data centers is projected to increase by more than 70%, rising from an estimated 70 TWh in 2024[70] to approximately 115 TWh by 2030.[71]

To accommodate this surge, the EU must significantly expand its energy supply. A promising avenue is to link renewable-energy investments, particularly those under the Green Deal[72] framework, to the power needs of Europe's growing AI-related data centers infrastructure.

(iii) Semiconductor manufacturing constitutes the base of the AI value chain. Currently, it is dominated almost in its entirety by Taiwanese, South Korean, American and Chinese players. [73]

If the EU seeks to compete at the global level, it must secure the underlying industrial and manufacturing capacity necessary to do so, while reducing excessive external dependencies and strengthening technological sovereignty. This objective can be pursued either by fostering semiconductor production by European firms or by establishing strategic partnerships with global players to locate part of their fabrication capacity within Europe.

[67] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L 202/1, art 99(4).

[68] Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector (Digital Markets Act) [2022] OJ L 265/1, art 55.

[69] European Commission, *Artificial Intelligence Innovation Package: AI Factories and Support for AI Start-ups* COM(2024) 25 final, 24 January 2024.

[70] International Energy Agency, *World Energy Outlook – Special Report: Electricity Consumption of Data Centres*, section 2.2 (IEA 2023).

[71] International Energy Agency, *World Energy Outlook – Special Report: Outlook for Electricity Consumption from Data Centres*, section 2.3 (IEA 2023).

[72] European Commission, *The European Green Deal* COM(2019) 640 final, 11 December 2019.

[73] World Population Review, *Semiconductor Manufacturing by Country 2026* (World Population Review, 2026).

In conclusion, strengthening Europe's competitiveness in AI requires a recalibration of both the Union's regulatory framework and its broader regulatory philosophy.

Shifting toward a more effective, principle-driven decentralized approach would enable European companies and start-ups to innovate more rapidly and bring AI systems to market with fewer structural obstacles, while a network of specialized authorities ensures compliance with core principles and the protection of fundamental rights. Such a framework would serve as a foundation for a globally competitive European AI ecosystem. Additionally, an ambitious industrial policy that embeds AI development as a strategic priority would act as a catalyst for the creation of world-class European champions.

The combination of enabling well-designed regulation and a decisive industrial policy would unleash Europe's capacity to innovate, scale, and ultimately lead in the global AI race.

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